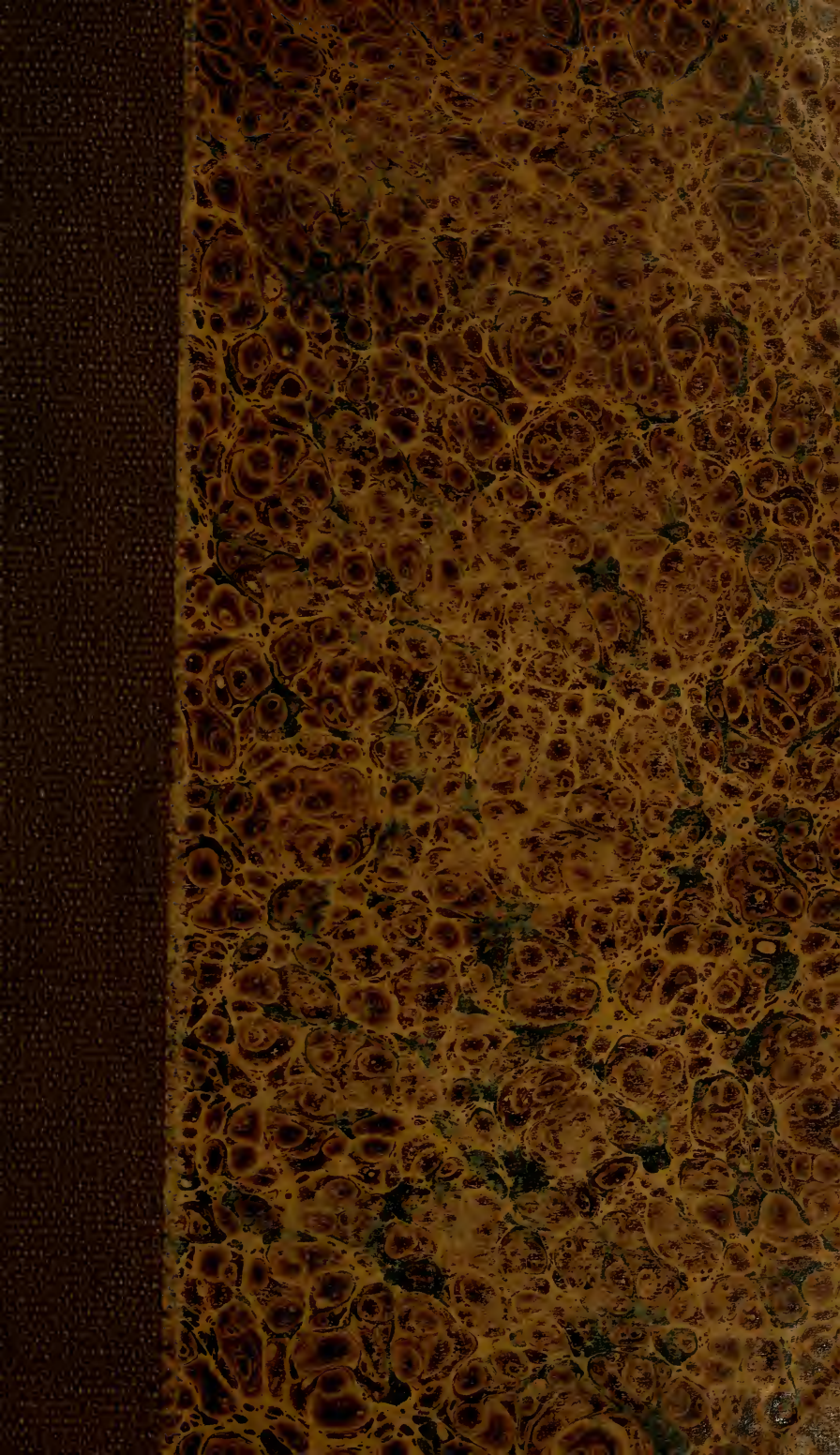




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AN ESSAY
ON THE
REMITTENT AND INTERMITTENT DISEASES,
INCLUDING, GENERICALLY
MARSH FEVER AND NEURALGIA.
COMPRISING, UNDER THE FORMER,
VARIOUS ANOMALIES, OBSCURITIES, AND CONSEQUENCES,
AND, UNDER A
NEW SYSTEMATIC VIEW OF THE LATTER,
TREATING OF
TIC DOULOUREUX, SCIATICA, HEADACH,
OPHTHALMIA, TOOTHACH, PALSY,
AND
MANY OTHER MODES AND CONSEQUENCES
OF THIS
GENERIC DISEASE.

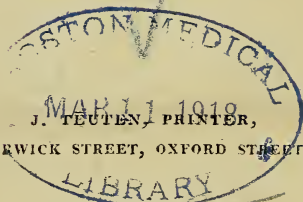
BY JOHN MACCULLOCH, M.D., F.R.S., &c. &c.,
PHYSICIAN IN ORDINARY TO HIS ROYAL HIGHNESS PRINCE
LEOPOLD OF SAXE COBOURG.

IN TWO VOLUMES.

VOL. I.

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10. S. S.

PREFACE.

As long ago as the period of my college studies, my attention had been excited by what has been called the *Tic douloureux* : and, even then, I came to the conclusion which every successive year has confirmed, that it was intimately connected with intermittent fever, both in its nature and causes ; while it therefore became an obvious conclusion that its remedies should be sought among those by which that disease is cured.

I could not, then, nor long after, discover that this view had been adopted by any one : and finding no support, either from books or in the existing profession, for an opinion which, the more I studied the subject, appeared to involve consequences the more important, I have, even till now, forbore to make it public in this manner ; unwilling to lay claim to the character of a discoverer, to pretend to be the only correct observer among the thousands who cultivate physic.

Nor, though I have never ceased to communicate that opinion, as well to patients as to my own profession, have I succeeded in giving it currency : having thus influenced but a very few of my most intimate medical friends, and even with those, not producing that more extended conviction as to the subject at large, which I am now about to attempt in another manner. If I also attempted, in a brief essay, some time ago, to call the general attention to the whole subject of *Malaria* and the diseases produced by it, I found no better success ; since some years have now passed, and no result has followed

as to any one of the subjects then pointed out for investigation.

My wish was, that some one else should undertake a task to which I felt no inclination ; and though the great bulk of this work, including the essay on Malaria, has been ready more than ten years, I had no desire to increase the mountain of medical books ; to add my own volumes to the three hundred thousand, which, according to a French Bibliograph, physic has already produced. But I have waited in vain, and have perhaps done wrong in waiting for others so long.

If, at the present day, there may be a few practitioners who have commenced to take the same view, it is unsettled and vague, as it is limited and imperfect : while I think that I can generally trace it to the propagation of my own notions ; not very likely to make much impression, either on my professional brethren or on that body which is called the world. Were a proof of that state of medical opinions required, it would be found in the practice as to this disorder ; than which, even now, nothing can well be more unsettled and more tentative ; empirical, even where it chances to be right, and imperfect even then, for want of general and just views. And indeed on this point, nothing can offer a stronger proof than the adoption of that practice which consists in the division or extirpation of the diseased nerve ; an expedient than which nothing can be conceived more unphilosophical, while it is also useless ; and, though now fallen or falling into disuse, abandoned, not from juster views of the nature of the disease, but from want of success ; while still regarded with affection by some who no longer venture to adopt it. And could this be still doubted, it will be sufficient to read what has been written on this disorder, both in professed essays and in casual notices : while not to quote these, that I may avoid disagree-

able criticism, we may find cases, even of very recent date, considered as inflammations of nerves, and treated by the remedies of inflammation, even by persons of the very highest repute in physic and anatomy.

And not only will these proofs be found in the writings on this specific subject, but in those which treat of the various obscurer diseases belonging to Neuralgia or connected with it : since in not one treatise on those disorders which I shall hereafter prove to be of this nature, be they palsy, headach, toothach, ophthalmia, or what not, do I find the slightest allusion to this cause or connexion ; even when the recorded symptoms are such that it often appears wonderful how the fact could have been overlooked.

It is far from agreeable to draw the same conclusion from a reference to persons, even though I forbear to name them : but it really is so necessary to produce every apology that can be found for a new medical book, that I must, even thus, attempt to establish the claims of the present one to novelty ; as that quality which, in addition at least to utility, forms the only excuse for publication. These persons were physicians in extensive practice and of unquestionable education ; and, of them, two carried the disease to their graves, after many years of extreme suffering under erroneous practice ; one also having been the victim of the disorder itself ; while the other, after nearly twenty years of the same fate, is still a sufferer, and has also paid for his want of knowledge by the almost total loss of his intellects.

Thus much it appeared necessary to state in the way of explanation, as to the primary causes of this book. But in the course of the original investigations, it seemed to me that I discovered, both in practice and in books, many disorders which appeared to be ruled by the same analogies, yet of

which this view had not been taken : and thus was I gradually led to investigate the whole wide question of the intermitting diseases, and lastly, what soon became unavoidable, to inquire into Malaria as the great cause of the most conspicuous of those.

Hence a wide field became at length opened : while I found that it would be impossible to elucidate the one subject which had first occupied me, to the conviction of others, without bringing forward those analogies and that generalization which I had formed for myself, and on which I considered that I had established the doctrines here produced. Thus would the very dependence of Neuralgia on the febrile inter-mittent diseases, have compelled me to examine into these latter ; as, without their history, it could not have been elucidated ; since the whole, as I trust to prove, form but two departments of one subject.

Even thus, this book must have become what it is ; including the essay on Malaria. But the course of observation on English opinions and practice, on the great neglect which the febrile diseases arising from this cause had experienced, produced other reasons ; and that there also were, in addition, justificatory ones, I have become more convinced, by a course of reading which was not entered on till long after these opinions were combined into that essay which has received from those authorities nothing more than support or illustration.

In assigning these reasons, I have the same unpleasant task to go through as with respect to Neuralgia ; implying an assumption of discernment and knowledge above those to whom I write ; though it is, in truth, no more than must happen to every one who, in whatever department of science, proposes to convey instruction. Unfortunately, physic is the science in which this is the least endured ; from causes which I shall

leave to the enlightened members of my own profession to assign.

But as far as there is any ignorance in our own country, as to Malaria, or as to the obscurer intermittent disorders which it is here my sole object to elucidate, it is but just to attempt an apology : and this is, that while the modern improvements of England have very much reduced the production of that poison, so the rarity of decided intermittent fevers may have led to ignorance and neglect respecting their obscurer varieties ; though I know not how to find any apology for those who persist in mistaking the fevers of marshes for typhus. But thus must tradition, example, habit, govern the majority in every thing ; since all cannot be philosophers and observers. Let the value of this apology be what it may, it must appear extraordinary to say, that a class of diseases so prevalent as this is, and on which the treatises may be reckoned by thousands, should now be a subject of obscurity or error to physic and physicians in any country. Nor will it appear less confident to suggest, that where the causes of Malaria, and of these disorders of course, have so long been known, any ignorance could prevail as to the locality or nature of those, or any neglect as to the prevention of the incalculable misery which they produce. Yet I have shown that this is most notoriously true of England : while as to the diseases thence arising, if it is among ourselves also that the ignorance and inattention are most prevailing, even the medical profession in other parts of Europe is far from exempt.

These are remarks which will, I hope, be fully established hereafter, in as far as they have not already been so in the essay on Malaria : and they are therefore sufficient to complete the present apology : since, if there is any portion, of

which the novelty and importance are sufficient to justify a new book in physic, the same reasons apply to the whole.

Nor would any motive but the hope of adding something to our recorded knowledge, and of rectifying erroneous opinions and practices, for the purpose of diminishing the sum of human misery, have tempted me to make public, after this long delay, what I would more gladly have received from the pen of some one of higher repute and authority ; knowing well how little is the impression which must be expected from one who has no name in physic as a teacher or a practitioner, and who, to his obscurity adds the misfortune of being a contemporary, though not a rival ; and a contemporary perhaps too much known in other departments of knowledge. This is a situation which, in our own country at least, has ever been a condemnation in itself ; as if the knowledge of science in general was an obstacle to the knowledge of the sciences in particular, and as if the powers of observation and reasoning were not faculties of universal application ; as fitted to extract the truth from one class of phenomena as from another. But if it is the conclusion of the ignorant, it is perhaps also the conclusion of a commercial country, where science and literature are alike regarded as trades : and being the especial and peculiar conclusion of England, we must all submit to what we cannot rectify.

If I regret this, it is because the effect will be to diminish that utility which is my sole object, and to which authority is so essential. But I shall have discharged my conscience ; since my sole object is to diminish human suffering, or to increase human happiness ; a duty which every man owes to society, and, I do not speak it fanatically, to a much higher Source. It is the especial duty of that profession, of which

the very end and purpose are but this, however lost sight of under other and interested views : and if circumstances have prevented me from doing that duty in person, I must atone for it thus ; convinced that I am here putting into the hands of mankind the means of benefits to which my own personal exertions would not bear the most minute proportion.

This object will, I trust, atone for an anxiety to enforce and prove what is advanced, of which I am too conscious not to perceive that it betrays itself everywhere, even to repetition and superfluity. But I hope it is a pardonable one ; since, depending on a conviction that physic can or could save human life and remove human suffering where it does not, it is the feeling that life is lost and misery produced from want of knowledge, and that in taking less trouble to prove what I consider right, I should myself be culpable. Such anxiety will perhaps seem to imply a bad case ; a feeling of doubt, which is often indeed expressed in foretelling a want of success. But that anticipation is the result of experience ; of the only ground of prescience : since, having failed to convince in conversation, I know not why to expect better success in print. Yet this is not a question of opinion, but of evidence. If the facts are true, and the induction correct, then must others become of the same opinion ; unless they have, as Locke well remarks of the entire world, no ground for opinion but habit and example, and disclaim that quality which is presumed to distinguish man from other animals.

The facts have been taken as they occurred ; they are the common property of physic and physicians, and I believe that they are all admitted. They have been approximated and classed, fallacies have been rectified, superfluities eliminated : they are facts still. This process has been continued until one leading fact has been found to appertain to the whole : it

has been deemed the essential one. This is the induction : if it be a legitimate one, the facts continue to be evidence, or the point is proved. This is the usual machinery of all science : and by this process have the sciences been erected : rescued from the chaos of empiricism, and consolidated. Any one may use it : but if it is not available in physic, let it be shown why. Physic has indeed been too long empirical ; but it ought not, and I think it needs not. It has proceeded too much on what was apparent ; and thence its errors. I have attempted to trace a train of analogies, and to arrange a multitude of appearances under one simple principle : I may have failed ; but this is at least the right road : and if earnestly followed, it will in time be successful.

To return to some explanatory remarks as to the plan of this work. If I have been so minute on the existence and sources of Malaria as to have occupied with that subject the volume which precedes these two, I cannot think that I have been more full than it deserves, when I reflect on the ignorance which prevails respecting it in our own country, and on the contempt in reality in which it is held, as if it were a fiction or a romance, and on the enormous mass of evil consequent on such a state of the public mind. Of that essay, and of its possible utility in preventing diseases, the public will now be able to judge. That the present volumes necessarily refer to it, was as unavoidable as that they depend on it : nor could I have acted otherwise, without materially enlarging the bulk of the medical portion of this work, while even then leaving it an imperfect one.

With respect to that volume which relates to marsh fevers, I must observe that it was not my intention to write a treatise on those disorders in their decided forms ; since, on these, the world abounds with books, and often of great merit. Here, I

could but have compiled, as many systematic writers have already done : and while I had no intention of adding a compilation to the heap, I had no wish to copy or extract where I could so much better refer to the originals, or to compilations without number. Had I indeed treated of every disease belonging to this subject as it deserves, I must have extended my own volumes to many more, as will be obvious from the number of disorders which it already embraces. The object in this part of the essay, has been to explain those modifications of marsh fever which have been misunderstood or overlooked ; that I might rectify the opinions and the practice on many matters that have been greatly, and in my own view, dangerously mistaken or neglected. Hence I have made use of the purer forms of these disorders no further than was necessary for the attainment of this leading object ; otherwise than as I have thought it useful to offer remarks on them as they occur most commonly in our own country. Thus I have even dwelt on the slighter cases or varieties, while I pass over the severer ones ; and thus also is the chief attention bestowed on the chronic, the obscure, and the anomalous disorders of this nature, since, to explain what has been mistaken or unknown, is the object of the work. And as it is to the already educated, and not to mere students in physic, that this essay is directed, I have often passed over matters which cannot fail to be known to every one, and which would have swelled a book already too large, to an unnecessary bulk. And it is for the same reasons that I have omitted to treat of dysentery and cholera, together with a large list of disorders endemic in marshy situations ; avoiding further, those great consequences, the visceral diseases, from motives equally obvious.

I have now one general observation to offer as to the whole

of these irregular marsh fevers, which I consider an important one as far as it relates to the credit which ought to be attached to the remarks on them. I might equally have applied it to the division of the Neuralgiæ, had there ever been any thing written on this subject with which my own remarks could at all have come into collision.

The entire opinions respecting the former disorders were founded on my own observations, and must be considered therefore as entirely free from previous bias or borrowed theory. Their origin was what I have already described ; and a space of much more than twenty years has been occupied in correcting and confirming them. Nor was it till long after they had been generalized into the present form, that I even thought of inquiring into the opinions of others, not supposing that my own possessed any peculiarity ; while the entire essay was written before I undertook that examination of authors whence I have since made those additions from which I thought I could derive authority or elucidation.

The coincidences therefore, wherever they occur, I must consider as a proof of the truth of such views ; while I am bound to say, whether it shall make against this truth or not, that I have been unable to find any such general view in any of the authors whom I have consulted ; and while I see also plainly, that many, of even the highest reputation in physic, at all periods, have proceeded under the errors which I have here attempted to correct.

Among these, I cannot very well except any one but Strack, whose work on intermittents, as it relates to this subject, is by far the most decided ; though, even under his collection of cases, he does not appear to have seen the full importance of the subject, nor to have formed that generalization which we might have expected. That he did not see his way through

the entire question, is indeed plain ; nor, from his work, should I have been able to form the present deductions : and when a recent careful writer, Dr. Philip, has not drawn the same conclusions, even when largely quoting him, it is sufficiently plain that they were not really indicated, and that physicians in England have not, to this day, been aware of the importance of the subject : a fact indeed which the slightest examination of modern practice will amply prove.

With respect to authorities generally, if those which I have cited are not very numerous, they are, I trust, sufficient for the purposes of a work which was not intended to be a compilation. It was for the sake of giving weight or adding elucidation to what might have seemed insufficiently proved or obscure, that I required authorities ; and if there are not more, it is not that I did not seek them, but because they were difficult to find ; since my task was often that of translating or analyzing confused or misunderstood histories of disease, or of seeking under very improbable designations, for that of which I was in want ; while often therefore compelled also to perform a critical office on what I have borrowed or quoted.

Such as they are, I hope there are enough for the end in view ; and if I have neglected much and distrusted more, that will not require much apology to those who have read widely in medical reading. There are many physicians who will, I believe, agree with me in the fruitlessness of seeking among the antiquities of this science, for correct information or solid opinions. It is but an affectation indeed which attempts to establish medical doctrines on the works of the remoter ancients, on Hippocrates, Galen, Celsus, and so forth ; however interesting, and even necessary in a certain sense, it is, to trace the antiquity and infancy of this, as of every other science. But to recur to those days for evidence or informa-

tion, is as if we were to commence our studies of natural history and chemistry with Dioscorides and Theophrastus, Aristotle and Pliny, as if we were to found our music on Aristoxenus, or our astronomy on Ptolemy. The knowledge of natural history, and of physic as one of its branches, was, in those days, nothing: it was nothing for nearly twenty centuries after: and though we have much reason to blush at the small progress we have made in our own department of this great study, yet has it been greater in the last century than in the whole preceding age of the world. "Galen and Hippocrates" will always be valuable to the learned in physic: but to hope to learn physic from them, or to build books on them, is to be pedantic rather than ignorant: or it is to be ignorant of the truth of the parallel which I have here drawn, and of the history of knowledge.

If, when I count the pages of this entire work, I am inclined to apologize for its length, I am rather more induced to ask pardon for its brevity when I recollect the subjects and the diseases which it undertakes to discuss. With respect to the manner of treating the medical questions, I know of nothing in physic to prevent it from being examined in the usual manner of every other philosophical investigation, and in the most ordinary language. The more obscure, and the more inductive and conjectural the philosophy of physic is, the more does it demand every simplicity in the mode of discussion that we can apply to it. And if technical forms of reasoning or technical phraseology cannot always be avoided, they cannot be too much shunned; not merely because they corrupt the English tongue, but because words and phrases thus become the substitutes for ideas, cheating us with the semblance of reasoning, and "signifying nothing." With such language, it is easy to write books on all subjects, not on physic merely:

but to translate them into intelligible English, is a test which he who loves to think that he has acquired knowledge, must not apply.

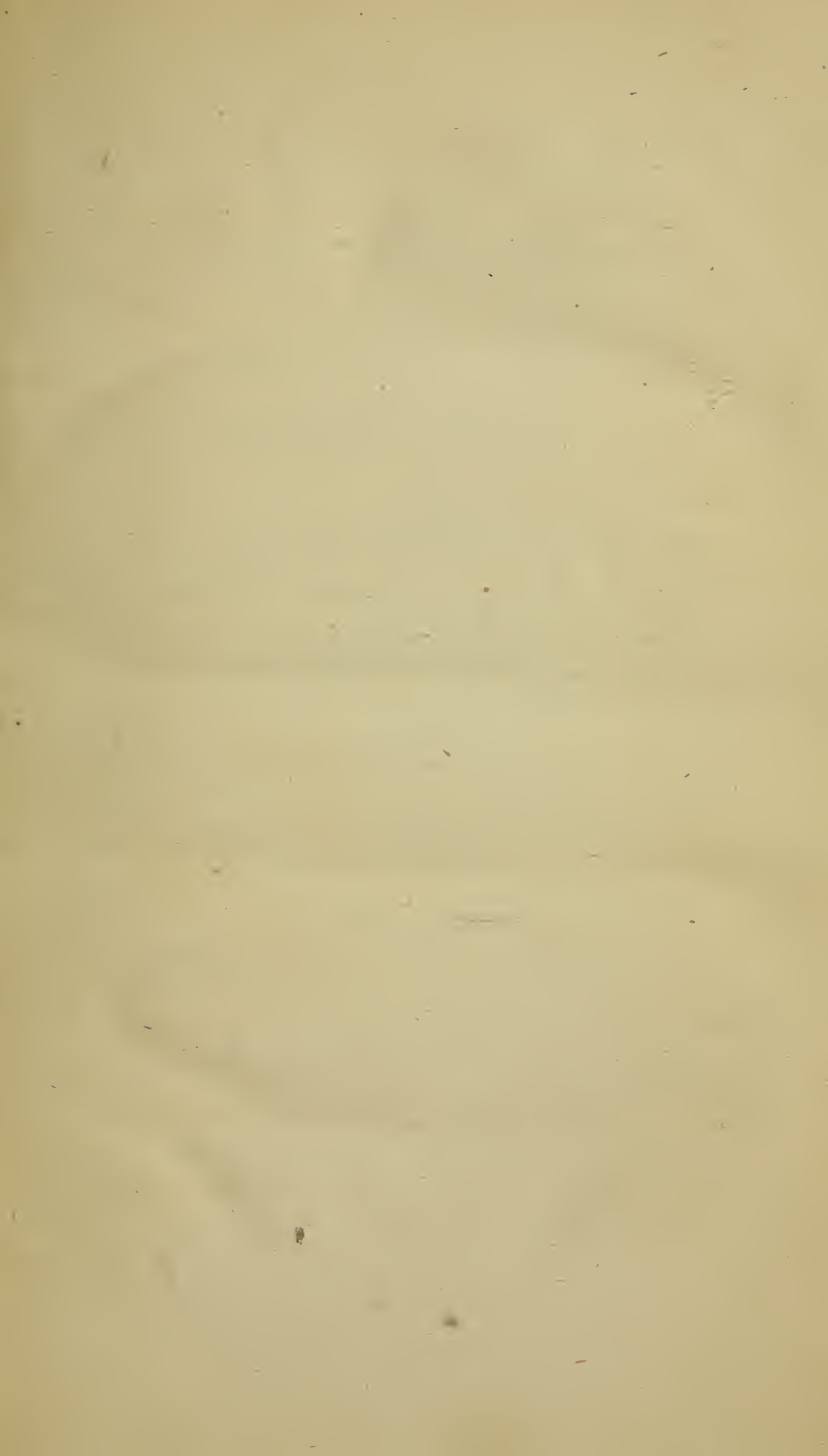
But we cannot always avoid what we would wish to shun : for as it is the fate of science to begin with conjecture and assertion, as its infancy is the reign of the imagination, so is physic yet in that very infancy, wandering about its own fairy land. Ptolemy and Theophrastus were indeed the predecessors of Newton and Linnæus, but the Newton of physic is yet to come : and he who knows this study best, knows best also, that it is not the metaphysicians and the jurists, the Platos and the Kants, the Tribonians and the Heineccii, alone who have appropriated to themselves the language of vacuity and chaos. If this science abounds in bad observation, in imaginary experience, and even in positive *mala fides*, so have the laws of philosophy and logic scarcely yet found their way into it. The language of truth is simple and brief, but that is not the language of physic. Its words have meanings, and the same words have always the same meaning : but this is not the language of physic. The language of error is multitudinous, variable, vague and unsteady : and this is the language of physic. If there be a philosophical reader who doubts this, if there be a logician, a man accustomed to evidence, who has not read medical books, let him read even the most celebrated and be satisfied.

But he who is now the philosopher in physic is also a Pythagoras while he does not perceive it. There is a dogma, not to be questioned : a principle to which the facts are to be referred : and, once invented and laid down, it is, as in the Catholic Church, an article of faith, never again to be questioned ; till a fresh sect separates, to enact its own equally infallible laws. This might be as inoffensive as the eternal fitness of

things or innate ideas, did it not interfere with human life and happiness. But to borrow the expression of a learned friend on the subject of legislation, the physician is like Nebuchadnezzar : he dreams, and death is the sentence of him who cannot divine what that dream was.

Let me make one further explanation, and finish. The object of this essay is to propose some changes of opinion, and to recommend some alterations of practice, as to certain disorders. The very attempt therefore implies a disclaiming of former and present opinions and practice : while in desiring to establish that what is different, and proposed, is right, it becomes necessary to prove that what was and is, was and is not right. But as opinions are the opinions of persons, and as practice involves their actions, no assumption of wrong as to the state of medical science or practice, can be made without implying wrong in those by whom it is cultivated and administered. Hence the unavoidable criticisms on the science and the art, must always appear to involve those cultivators who form the profession : while the inconsiderate will imagine a general personality to be contained in that criticism which is as purely impersonal as it is unavoidable.

To end. If, in the preceding volume, or essay, I have preferred the Italian term *Malaria* to *Miasma*, so I have here adopted the term *Neuralgia* ; because, while the associations attached to words become almost insurmountable, I consider that the trifling French term, *Tic Douloureux*, has long been an obstacle to the knowledge of these diseases, from its inveterate association with the face exclusively : since it would be as difficult to convince the people at large that a disorder under this name should exist in the finger or the toe, as that it might be attended with very little pain, or be an inflammation, or even a "fit of the Ague."



ERRATA.

Page 1, line 4 from bottom. for investigation, read investigator.

— 21, — 10, after as, insert has.

— 69, — 9, for detached, read detailed.

CONTENTS TO VOLUME I.

CHAPTER I.

<i>On the ordinary Remittent or Marsh Fever</i>	-	-	^{page} 1
---	---	---	----------------------

CHAPTER II.

<i>On the chronic or relapsing and obscure or anomalous Remittent</i>	-	-	-	-	-	-	40
---	---	---	---	---	---	---	----

CHAPTER III.

<i>On the proximate cause of Remittent or Marsh Fever</i>	136
---	-----

CHAPTER IV.

<i>On the Cure of Remittent Fever</i>	-	-	-	-	144
---------------------------------------	---	---	---	---	-----

CHAPTER V.

<i>On the Dysentery and the Cholera</i>	-	-	-	-	216
---	---	---	---	---	-----

CHAPTER VI.

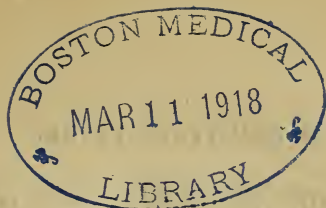
<i>On Intermittent Fevers</i>	-	-	-	-	-	235
-------------------------------	---	---	---	---	---	-----

CHAPTER VII.

<i>On the obscure, anomalous, and simulating Intermittents</i>	278
--	-----

CHAPTER VIII.

<i>On the Cure of Intermittent Fevers</i>	-	-	-	-	431
---	---	---	---	---	-----



CHAPTER I.

On the ordinary Remittent or Marsh Fever.

IF it were my purpose, as it is not, to compile a general account of this disease from authors, I know of none in the whole circle of physic on which I have read with less satisfaction. He must labour with no small discrimination, who would, from medical works, extract any rational account of the immediate causes of the disease or of the real condition of the system under it, who would discover any intelligible and consistent method of cure, who would even be always certain that it is of this disease and not of contagious fever that he is reading ; as he must also possess talents at reconciling or balancing evidence which are not the lot of all. It is more likely that he who imagines he has done this, is an *ex parte* judge ; seeing the question by his own one light, or cutting the knot which the patient investigation could not untie.

If that is true of this disorder as it is known to us, and if it is partly owing to that confounding, in practice, of marsh fever and contagious fever

which I have criticized in the essay on Malaria, it is not less so, if from different causes, of the disease in that form of greater severity which it assumes in hot climates. And while, in these varieties, I have no personal experience, I feel that I have as little right to doubt or criticize, as I have, but too often, little reason to place confidence. Fortunately, it is not of great importance as to the present essay; of which the object is rather to notice the diseases of our own country, and to point out obscurities which, however known to many physicians, are not generally so, either to practitioners or patients; while it is a further object to class together some disorders which appear to have been as much misplaced as misunderstood, and which, misplaced as to their causes and characters, have been necessarily treated in an erroneous manner.

As the head, unquestionably, of that great class of diseases originating in Malaria, it was impossible, in any view, to omit the Remittent Fever. It is the most important link of the philosophical chain, and, further, it is connected with others as their apparent cause: or, that disordered state of the body which commences as remittent, may terminate in almost any other modification of the diseases of Malaria; probably, in all.

But, even as a simple and original disease, the common remittent fever requires notice here. It is usual with physicians, and very naturally, perhaps properly, to treat of diseases in their more perfect forms; but a perfect disease is far less common than an ill-defined one, a highly severe one than a more mild. And while, in these two sets of instances, the obvious symptoms may vary exceedingly, it happens, even daily, that the unreasoning practitioner or the bad observer, unable to refer the disease to its usual description, becomes at a loss, or falls into grievous errors. Hence arises the necessity of describing the varieties of a given disease, as far as it is possible to classify such varieties or simplify their description: and this becomes peculiarly necessary when such varieties are subject to be mistaken for some other disease where a different kind of treatment is necessary.

Hence it is that, in this variety of marsh fever as well as in the intermittent, my purpose is chiefly to notice that which is either obscure in itself, or least generally known; proposing both these divisions of the present essay as supplements and additions to the numerous treatises already existing, rather than as systematic descriptions in themselves. If there are authors,

as their are some, who have casually noticed such modified forms of those diseases, they have not yet been all brought together under one consistent view; nor, what is perhaps even more important, have they been associated into one system with the still more obscure, local and partial disorders with which I here purpose to prove that they are connected.

There scarcely appears a reasonable ground of doubt in the present day, that the cause of remittent fever in its perfect form is the application of Malaria. Cases however do occur, under the most apparently careful observation, while they swarm in medical writings, which would prove that various other causes do produce it; such as mere heat, errors of diet, fatigue, cold, mental affections, or other sources of debility. But every one of these is an accessory cause of many other disorders; so that the same may be true here also: while if it has been proved in the former essay, that Malaria is more easily generated, and transported further, than common opinion had decided, if it is often present when unsuspected or neglected, it is still likely that it is the real exciting or productive cause, and that all the others are but casual or assisting ones.

This question I have however examined under

all the lights I could throw on it, in the preceding essay : to recur to it here, would be mere repetition, when I consider that, to enlightened medical readers, this is rather the second volume of a single treatise than a complete work, and that, without enormous repetitions, I could not have rendered this portion independent of the former. All therefore which I can here permit myself to say is, that I have attempted to prove that all the fevers of any moment which are not produced by contagion are the effects of Malaria, very often, perhaps very generally, in our own country, overlooked ; and that while these two leading classes constitute the great mass of fevers throughout the world, those which arise from the other causes here alluded to, are proportionally very small in number, and of very little moment as diseases, from their trifling power on the body. But if I have said that such causes are, by themselves, of little influence in producing fevers, that opinion can but be given as including a high probability ; since, in physic universally, we have not yet arrived at such accuracy as to enable us to decide on any exclusion in such a subject.

One only real exception seems well grounded. It is that cause which depends on habit. It is a

practical observation, that, not only in intermittent, but in remittent, at least in our own country, causes in which Malaria cannot be conceived implicated, do in reality reproduce, if they do not produce, both kinds of disease ; or that the accessory cause united to habit, or to facility in receiving or suffering diseases, is sufficient to excite those fevers. Thus does the remittent, like the intermittent, become at times, even habitual ; renewed, even over and over again, for years, though the patient should not quit his chamber ; and thus bearing an analogy, remote it is true, to contagious typhus, where one relapse at least can take place without the application of a fresh contagion : unless indeed, in this case, the patient's own contagion, applied in various obvious ways, may be the cause in question.

It is a fact, formerly noticed, that the intensity or severity of remittent is commensurate to the heat of the season or climate, provided the soil be a wet and a vegetating one ; and therefore the quantity of disease is in a direct ratio of either the quantity or the quality of the Malaria, or both. M. Deveze is but one of many who consider the quantity as constituting the real difference. There are at least as many more who presume on essential differences in the quality of the poison : but

to what purpose do we compare opinions when we are in want of facts? Unless indeed those which I formerly noticed when speaking of Malaria should be admitted as arguments in this case.

As in all cases of physic, however, either of these conclusions would require some modifications, and might even imply somewhat more; even to disputation. The subject of the disease itself, the human body, may be so affected by collateral causes in these instances, as to suffer more or less from the same strength or action of the primary cause. And while this is thought to be proved from the effect of mere heat on the biliary system in the case of pure cholera, if this disease be indeed the consequence of mere heat, it is easy to understand how an aggravation of the power of Malaria might accrue from the combination of such an effect with a simple fever. And thus may the greater power of any other of the secondary causes in this case, produce a severity of disease which, from neglecting this, might be attributed to a greater virulence or quantity of the primary one. This is a question, however, which I took occasion to examine in the essay on Malaria, or in that which is the first volume, properly, of this work; so that I need not repeat the doubts or arguments there suggested, as I

could but go over the same ground again. If it is a necessary question here, so was it one there : and while that is true of so much more, I can only regret a separation which was forced on me, and trust that many of the readers of these purely medical volumes, have mastered the preliminaries without which much of the present ones will appear obscure.

It is there also, in the last chapter, that will be found the detailed argument, to which I have just alluded, respecting the causes of fevers ; attempting to prove that many of the received ones are imaginary, and that the great, nearly the exclusive cause, of every conspicuous fever that is not contagious, is Malaria. That argument was there most needful ; as on its value, is very much built the necessity of those precautions which that volume teaches and inculcates : that it was needful here, is no less obvious ; while I must take it for granted that it has been read, and, I hope, admitted.

There also have I explained, in the eighth chapter, what relates to the influence of climate and season, as of other collateral circumstances in the production of fevers or epidemic periods, and in modifying the characters of those ; so that on this point also, which I should otherwise be

here compelled to speak of at some length, I must assume that my reader is in a state of information.

On this subject I shall only here add, that barely to enumerate these recorded varieties, would be, in itself, to produce a long chapter of little better than repetitions ; details without end, which must be consulted in the abundant originals where they are recorded. Should any reader not have travelled further through this species of reading than even in Rush's writings, he will, I am sure, readily excuse me if I do not even abridge what, though abridged, would form no small volume ; what, as it relates to every country and every epidemic, now constitutes, not volumes, but shelves of volumes.

To pass to other matters, it is a question of some importance what are the comparative effects of Malaria in this case, on the natives, and on strangers, or visitors ; and it is one of some little intricacy, or on which at least there are many contradictions, real or apparent. Such as these are, they will be generally solved by distinguishing between what, for want of better terms, may be called the chronic and the acute action of Malaria.

What the diseases arising from this poison are,

and what their effects on the natives and inhabitants of unhealthy districts, have been detailed in the preceding essay. In this place I must add, that, setting aside what may be called the chronic effects, and the disorders exclusive of fever and dysentery chiefly, it is not the fate of the inhabitants to suffer acutely from the latter in every season; while it is plain that if this were the case, extermination must be the speedy consequence. The more usual cause is, that after one, or perhaps more, severe fevers, this disease becomes chronic and intermittent; persisting uniformly in some cases, and, in others, ceasing during certain periods, whether annual or of longer duration, to be again renewed in a similar manner: a few becoming freed from it after a certain number of years, and at a period of life seldom under fifty, while a greater number carry it to that grave, of which the time ranges for them between thirty-five and fifty, if they have escaped as far as the former period. Such is the nature, and quality, or extent, of this acquired habit of resistance by the natives of an unhealthy district; or, in vulgar language, the "seasoning," which is also acquired by immigrants, if in a much inferior proportion: though I have stated a definite and perfect case, from which very many must

necessarily vary, but with which they can be compared.

Thus, such seasoned persons, or natives, escape many of the acute fevers which seize on immigrants and visitors; but in seasons of peculiar epidemics, they also suffer similarly; their powers of resistance extending only, as it would seem, to a certain point: and hence the mortalities so often recorded, which mark peculiar years, involving all in a common destruction. These considerations, varied according to climates, countries, or circumstances generally, which it would be tedious to detail, will explain the chief facts here concerned: while among minuter particulars which it would be endless to examine, it must be remarked that in certain climates, intermittent, or a chronic state of fever with facility of recurrence being more rare than in others, such a fever, once undergone, may be the pledge of a long continued security. I shall only remark here, to prevent mistakes, that, convinced by the evidences produced by Pym and others, I view the security against the "yellow" "Bulam" fever, produced by the same cause, as of a different nature, inasmuch as I must believe that this is a separate disease from the "yellow," marsh, or remittent fever. And the security in question is,

in certain parts of Flanders, Holland, and elsewhere, acquired even by young children ; so that having once passed a certain ordeal, they may lead a life of tolerable health, and even attain old age.

If it is on immigrants or visitors therefore that the marsh fevers, whether in autumn or spring, as remittent or intermittent, exert their chief action, so is it important to remark that those are most susceptible and suffer most, who immigrate, or are travellers, from healthy and mountainous countries : while the natives of flat, moist, or marshy ones, even should they not have undergone such fevers, are comparatively secure. This has often been remarked in France and Italy ; and it is said to have been very conspicuous in our army at Walcheren : while it is plain that it offers a valuable hint respecting the selection of troops for peculiar services ; but one, it is painful to say, which like much more as to this department, has not been considered or acted on as it deserved. On analogous grounds, I must also remark, that residence in a hot climate produces a similar power of resistance, or a “seasoning,” even though the person in question should not have undergone that constitutional change which disease seems to produce.

Yet there is a remark to be added here which is of considerable importance, if true; as I see no reason to doubt, when it is that of an experienced and careful observer, Pym; namely, that no residence, however long, in a hot country, produces this security if the winters are cold, or if the climate is not truly tropical: such periods of cold appearing to nullify the effects of the intervals of heat, and the important conclusion as to military service being, that Gibraltar, or any other hot country of Europe, does not operate as a "seasoning" for troops which are destined for the West Indies.

Such is the state of the leading question; but there is still a general contradiction remaining which I must attempt to explain; since he who should read on this subject in the hands of other writers, might come to a diametrically opposite conclusion: a conclusion indeed which might be formed from many parts of this very essay. This relates to the susceptibility of fever, commonly of intermittent, in those who have already experienced the disease: a susceptibility far too notorious, since few of those, among many others, who suffered from the fever of Walcheren, have escaped its returns in a chronic form on a fresh exposure to the causes. And this, in truth,

is the fate of the unfortunate residents in unhealthy districts ; since it is by continued or repeated exposure to the causes, that their fevers are renewed, and since the only cure in most cases is a migration to a healthier country.

The explanation seems simply to consist in a difference between the susceptibility for an acute and for a chronic disease, as I have already hinted, at least for the majority of cases : the facility of undergoing the former being decreased, while that of renewing the other is augmented : though I should also add, that as far as my own observation and reasoning go, I do not consider the doctrine of "seasoning," as to acute fevers, so well established as to deserve implicit reliance, and that wherever the disposition exists, it would be an act of prudence to avoid any such exposure, notwithstanding the experience and opinions which I have detailed. I need scarcely add, I presume, that, as happens respecting many other diseases, there are persons so constituted as to be unsusceptible of marsh fever in any form ; and what is not less familiar, that certain races of men are far less susceptible than others, even independently of any presumed "seasoning" which they may have derived from climate.

On the former fact, the resistance offered to

Malaria by certain persons, or from certain unknown causes, or at some periods of time and not at others, I have one fact which deserves quoting, because of its extremely precise character as a philosophical experiment, and because it would not be easy to find others of a similar nature. A young man was recommended to acquire an ague, from some fanciful project for removing a previous chronic disorder, and was sent into one of the worst parts of Kent for that purpose. The attempt was made by standing in a moist, but not watery, ditch, of bad reputation, for a certain number of hours every evening, so that the level of the ground was near his face. The project could not have been much better chosen; but it required nine days of perseverance before the end was obtained. It is a fact which, whatever other conclusions it may produce, will also serve to show how little we can prove a negative with respect to the power of any given spot in producing Malaria, in consequence of its failure in exciting disease; as it will scarcely, I think, be now argued that the poison required nine days to operate.

Another preliminary question remains before I enter on the history of the fever itself, and it concerns the time which intervenes between the

application of the poison and the production of the disease; and whether that be remittent or intermittent fever, is of no moment, since these are, truly, but modes of one disease. That there are some singular opinions on this subject which I am unable to explain, is true of so much more belonging to the history of these disorders, that it will excite no surprise.

If my own frequent observations show that fever may be induced within half an hour after exposure to Malaria, and that a single inspiration, or the space of a very few seconds, is amply sufficient for the purpose, this is also an opinion most decidedly stated by many French and Italian physicians whose experience and acuteness will not be questioned. It is equally the opinion of other observers, not physicians, and therefore without the bias which might be suspected in such cases: of military, and chiefly of naval men, whose observations have been founded on the momentary and transitory effects of a breeze of wind, and especially of a land wind blowing off to sea. In France and in Italy, to confirm this, instances are known and recorded, of labourers dying instantaneously from merely sitting or lying down on the ground, and of others who from looking into a ditch or drain, have been struck

dead by that poison which, of course in a minor degree, would have merely produced a fever. Lind also, whose authority stands high, describes the instant seizure with nausea and delirium, as many others have done; so that respecting this part of the question there needs be no dispute.

The more difficult point to determine is, to how long an interval after its application the action of this poison can be delayed: and here, to quote Lind again, this limit is extended by him as far as twelve days. As I have had occasion to say elsewhere, it is not believed by any one of whom I know, that Malaria can, like the matters of contagion, be attached to a substance of any nature, and thus conveyed to excite its diseases; and the observations necessary to determine this interval are not therefore entangled; while it is plain that, to make them truly, the patients must, after a momentary or brief exposure, be completely removed from all the original causes. It may be questioned whether this has often been carefully done or recollected: while it is certain that from a very frequent or general neglect of the obscurer spots or causes producing Malaria, such persons may often have been unwarily exposed to them, thus easily leading to unfounded opinions on this subject. And as many of the

recorded ones have been derived from facts occurring where armies remained on a given spot of ground, though the individual was not a second time exposed to the more obvious cause, it is evident that fallacy is easily introduced into the observation: particularly when what has been formerly said on the propagation, as well as the production of this poison, is considered.

Whatever the truth may be in this case, the present doubts are not expressed without as ample an examination of evidence as it has been in my power to make, and that examination consisting in attempts to ascertain at what most distant period remitting fever has appeared in ships after leaving the shore and thus getting out of the influence of the land winds. At first sight indeed, the opinion in question would appear to be confirmed by many of the cases which I have obtained from the log-books of ships of war, of which I shall however name but one, as it will be sufficient for the purpose. In this instance, a remittent appeared among the crew when on the coast of Africa; when the vessel put to sea on a cruize, notwithstanding which, however, other men became sick in succession during the space of twenty days, after which no further cases occurred.

It is plain that this is the kind of experiment

almost alone by which the fact of a long dormant state of the poison could be proved: but unfortunately it still leaves room for doubt, from our knowledge of the fact noticed elsewhere, that a remittent will become, or perhaps produce, in any given individual, a contagious typhus, under confinement; so that in this instance, as in other analogous ones, the fact may have been of this nature. Nothing but extreme accuracy on the part of the ship's surgeon in ascertaining the nature of such a fever, can render such cases evidence; and unfortunately, as I have more than once remarked, practitioners at large have seldom exerted themselves in making this distinction as it ought always to be made; since in every season, and almost in every place in our own country, to this very hour, the autumnal and marsh fever is called a typhus and considered a contagious disease. And when what I have formerly said respecting the production of Malaria by bilge water is recollected, it is plain, that, on this ground also, the above observation does not determine the question in doubt, and that it will always be a case very difficult of examination, from the uncertainties which must exist respecting the purity of the facts in evidence.

But whatever my own doubts may be, I am

bound to state the opinions of others, yet not without the remarks to which they seem exposed. Many physicians or surgeons, both English and French, have said that even after six months, many soldiers who had been at Walcheren and had escaped the fever there, were seized with the same disease in other countries; asserting also that the poison had remained during that time dormant in the constitution. Pym is one of those who thinks thus, and so I imagine does Blane; while Bancroft believes that the intermittents of spring are the produce of Malaria received in the previous autumn. Baumes, resembling Lind, limits the term to fourteen days; but Ferrus, coinciding with the former, relates in proof, a case of a soldier who having escaped at Walcheren, was affected with this fever six months after, on the Niemen; as there is also a case quoted in evidence, where an English regiment became attacked in the same circumstances in England, after eight months.

It may very naturally be asked why a fever produced on the Niemen should not have been produced by it, or why any such fever, any where, must necessarily be that of Walcheren, or of any other former residence, since fevers of similar characters may occur in many places: or why,

because an English regiment which had formerly been at Walcheren suffered from fevers in Spain, these should not have been the produce of Spain. These questions are obvious ; while, on physiological grounds, we must be troubled to conceive a poison of this, or of almost any nature, lying dormant in the body so long. It is much more reasonable to conceive a new disease and a new poison, of which the presence was overlooked ; or, as perhaps sometimes happened, that the disease had formerly been suffered, though in a slender form, and easily neglected among so many cases and difficulties ; thus producing that susceptibility which would mark one set of men rather than another as the victims of a new cause. I need only add, to these objections, that disorders of the spleen are frequently produced, without very obvious fever, and that as these give a susceptibility of Malaria, many of the cases in question have probably been of this nature. Why we should believe, with Bancroft, that a vernal ague should have remained dormant from the preceding autumn, when we daily trace the cause itself, or the exposure, and the consequent disease, it would be rather difficult to say. Let me therefore leave this subject to the opinions or prejudices of others ; for thus will it probably

be determined, by each, for himself; as is generally the fact in such cases. I may proceed to the consideration of the disease itself.

The symptoms of pure, or simple remittent fever, are too familiar to physicians to require detail, being that of every febrile disorder. And while I may refer to a hundred books for what I could not describe better, I must really also refer to them for such a history as should be a full one; since in so many of the recorded cases or epidemics, the variation in number, order, intensity, and superfluity of symptoms is such, that it would require no small space even to abridge what ought not to be abridged. Headach, lassitude, pains of the limbs, general debility, derangements of the *primæ viæ*, diminution of the intellectual powers passing to morbid excitement and delirium, augmentation of heat, with thirst and disturbances of the pulse or circulation, which may be mere acceleration, or more, include a sketch of the ordinary symptoms; while the heat, being temporary or paroxysmal, terminates, or not, in perspiration, and is sometimes preceded by cold, though the proper cold rigor is rarely found in this fever, after the first paroxysm, often also forming the first symptom of the attack. In some cases, the heat and cold occur in a very ir-

regular or disorderly manner ; but while I merely pretend to give a sketch, since to medical readers the bare term fever is sufficient, I need not detail these variations. Nausea, or vomiting may exist also in the simplest disease, but are more commonly depending on local affection ; while the state of the tongue, always febrile, varies with the quality and nature of local disease in the *primæ viæ*.

If I here forbear to give an accurate detail of the history of fever, so, for the more complicated forms of this disease, and for pictures of the more severe cases, as for the history of epidemic varieties, I prefer a reference to the endless authors on the diseases of hot climates ; but I may mention, that while an undue, and apparently a morbid secretion of bile is the most conspicuous and common local affection, producing sometimes what is emphatically called the yellow fever, so the brain and other organs, and above all, the stomach and the bowels, are often found affected by inflammations, modifying materially the symptoms, and also demanding important modifications in the practice.

From these circumstances, variously modified and combined, and from others possibly, consisting in the nature of the season or climate, in the

previous condition of the patients, or even in the very nature of the Malaria itself, arise those endless varieties of this fever, not merely as it relates to individuals but as to whole periods of epidemics, which have filled volumes, and of which a mere abstract would make no small book. Important they assuredly are; since, while they so often account for the discrepancies of medical writers, not merely as to the history of these fevers, but as to the practice adapted to them, so they are the necessary causes of great diversity in that practice. But where even a systematic writer on fever alone, is compelled to confine himself to a general abstract, and to refer to authors for these varieties, I shall be still more easily excused if I follow the same example; while I also refer to such systematic writers as Fordyce, Clutterbuck, Philip, and many more, even for that minute general history which it would be a mere waste of the reader's time to repeat.

It is necessary however to notice that characteristic symptom whence the disease derives its name. This is a remission or diminution of the intensity of the several febrile symptoms; occurring once in twenty-four hours, but exceedingly variable, not only in the period of its arrival, but

in the length of its duration and in the degree of relief which the symptoms experience. In severe modifications, and not unfrequently also even in mild cases, it either becomes difficult to mark this remission, or the fever appears to be thoroughly continuous, or is actually so, as far as any fever can be; though I should remark that oversights are not uncommon on this subject, from the occurrence of the remission during the night, or at a time when the physician is not present to observe it. It is important however that it should be watched and ascertained; as the salutary exhibition, not only of medicines but of food, often depends materially upon it; while it often can be discovered by due inquiries into the feelings of the patient during our absence, into the state of the appetite or desires at particular periods, and into the hour at which sleep is obtained. It is commonly by a gradual prolongation of this interval of remission, that this variety of the fever of Malaria becomes an intermittent; and this leads me to consider the terminations of this disease, though for a fuller detail than I think it here useful to indulge in, I must again refer to the numerous well-known writers on the diseases of hot climates, as well as to those who,

like Fordyce and others, have written fully and specifically on the subject of fevers.

I must still however remark somewhat more pointedly, as to the question of remission, that even among the most accurate and able observers, we find ample histories of this fever, more properly perhaps therefore called marsh fever, where it has been perfectly continuous, at least as much so as a typhus fever ever is ; while in such cases, the additional presence of petechiæ and the other associated appearances, renders it sometimes utterly undistinguishable. Hence in part, among other remarkable instances, the almost endless disputes respecting the Bulam yellow fever, so well known to every physician ; and hence also disputes, even more numerous, if less conspicuous, respecting various epidemics occurring in military and naval service ; disputes often including errors which have furnished misapprehended evidence as to the very existence of contagion. How intimately this question concerns us, even at home, I shall often here have occasion to point out, as I have indeed already done more than once in the essay on Malaria ; since from an unfortunate blindness as to the existence or presence of Malaria or its causes, added to want of reflection

among the mass of routine practitioners, and perhaps not a little aided by the now popular and vulgar use of the term typhus, it is almost the invariable usage, not merely of the people but of the generality of practitioners, to give this term to every continuous marsh fever; and not only so, but, more inexcusably, to apply it even where the most ordinary discernment and reflection would indicate a true remittent.

That fever is often regulated by certain critical periods, so as to terminate preferably on the third, fifth, seventh, ninth, eleventh, fourteenth, seventeenth, and twentieth days, has been ascertained by abundant observation; but as to such other minutiae, or more questionable effects, which may belong to a similar influence, whatever it be, I must refer to Balfour and other writers. The same authors also, will describe those cases of excessive severity, unknown to our more fortunate climate, where the disease terminates in death within the first days; but in our own country, I know not from experience that it ever thus terminates sooner than the seventh: yet if death at that early period is unusual, except under very improper treatment, we may often witness the entire recovery, or the sudden and decided transition into intermittent, after a very few paroxysms;

in rare cases, even after one. Three weeks may probably however include the much greater number of terminations in recovery when the disease submits to the law of the critical days; while it is not uncommonly protracted to six weeks; and even in cases where its extreme mildness might have led us to expect an earlier solution. Where this law does not seem to exist, we can assign no period for the recovery, as we can fix on no particular time when it is to be fatal; but I may remark that except in the case of relapse, the protraction of remittent beyond six weeks is a very uncommon occurrence; though, in my own experience, this long duration is not extremely rare.

The termination of remittent is often perfect, and in every climate; while as I have just remarked, it sometimes subsides into an intermittent. This intermittent also frequently disappears after a few paroxysms, and even without remedies; as, often also, it is easily removed by the well-known medicines. But in other instances, it not only becomes durable but inveterate, assuming any one of its numerous modifications. This event is decidedly much more common in the tropical and hot climates than in our own; while it seems to be peculiarly conspicuous in

certain countries or situations, preferably to others, where the cause of the difference is not obvious. Some parts of China have been noted in this manner ; and it has also been asserted of some particular situations in Greece, in Italy, and in Spain ; while, if my information is correct, the intermittents that follow the fevers of Moldavia are particularly noted for their inveteracy, as well as for the peculiarity of their attached symptoms. A fuller enumeration of this kind might easily be made ; but it is better to refer, as before, to the well-known works, for that which would serve little purpose, thus separated from the entire history of peculiarities in this disease, or of the varieties to which marsh fever is subject. Yet I must also remark, that in this case, it would seem as if certain situations, or peculiar varieties of Malaria, or else perhaps the fevers which they produce, had an especial power in generating, not simply an inveterate intermittent, but a habit of acquiring, or a facility in renewing the disease, which often renders it the inheritance of what may remain of life. Walcheren, I need scarcely say, has been a noted instance of this nature ; and that the cause has been deemed to consist in the formation of certain durable organic derangements, is a question

which I shall have occasion to inquire of hereafter.

As remittent may terminate in intermittent, so does it produce, or end in, the local and painful affections of the nerves which may be ranked under the general term Neuralgia. This is a subject however which will find its more proper place under that head; as it must then be brought forward as a proof of the common origin and connexion of these two apparently most distinct diseases, and of the general dependence on Malaria, of the several disorders which I have treated in this essay.

The production of paralytic affections by remittent, or its termination in such disorders, is a subject somewhat complicated; and thus, while often overlooked or mistaken, or else denied, it cannot be named without entering into some necessary explanations and limitations, that, if possible, the truth, and nothing more, may be stated.

That marsh fever does act directly, itself, or its generating poison, on the nervous system, is proved by the state of apoplexy or profound coma with which the attack is sometimes ushered in; a fact common in Italy, and known by the name of *febbre larvata*; though, in this case, mere intermittent may also be the supervening

disease, instead of remittent. That, in these fevers, the affections of this nature have been attributed to local diseases of the brain, I know; and such events may doubtless occur. But this does not explain the cases in question, where the affection of the brain is instantaneous, following directly the application of the poison, even before fever is produced, and resembling that which occurs from the application of other poisons, whether to the lungs or the stomach.

Farther, as it is the effect of Malaria to produce the local affections of particular and single nerves, either with supervening or present palsy, or without either, while the brain is not affected, and while no local inflammation or other disease of that organ can be supposed to exist, from there having been no previous fever, it is plain that Malaria does exert a power of some kind on the nervous system directly; on the whole, or on more or fewer of its parts, even to a single point in the minutest nerve.

Thus then the larger paralytic affections, such as hemiplegia, or palsy of a leg or an arm, consequences occurring from intermittent as well as remittent, are probably direct actions on the nervous system; while, as paralytic diseases, more or less durable or extensive, do also follow that

merely painful affection of the nerve which was the produce of Malaria, the whole of these effects seem to be concatenated under one general cause or action.

And in this manner we can probably also explain that diminution of the powers of the intellect, often proceeding, even to perfect idiotism, which sometimes follows severe or long continued remittents; and which has been known to influence the faculties through life; though, in this latter case, there may sometimes be organic diseases in the brain itself, the produce of local inflammation during the fever. I am still more inclined to conclude, however, that, whatever the diseased state of the brain, as of a single nerve in the analogous cases, may be, the cause of this injury to the mental faculties, as of all the paralytic affections, is not a previous inflammation, in the vulgar sense of that term; because it will be remarked by those who can forget the prejudices connected with their practice and derived from their hypothesis, that these fatuous and paralytic symptoms or disorders are peculiarly apt to affect those patients in whom bleeding has been misapplied; just as the same mistaken practice often causes the merest local affections belonging to Neuralgia to terminate in the same manner.

This particular subject must necessarily come under review again, in treating of the local affections of the nerves produced by Malaria; but I cannot terminate it at present without offering one suggestion. The local application of cold sometimes produces complete palsy, as is well known; and it seems to me that the hemiplegia of labouring people, often attributed to drinking spirituous liquors, is sometimes at least, and probably very generally, the consequence of sleeping on damp ground, particularly after fatigue. And in such cases it also appears, that, however the action of Malaria may here be suspected in certain climates, simple cold, in a country free of Malaria, is sufficient to produce the effect; just as a general torpor of the whole system, particularly in feeble or old people, is often the result of a long-continued exposure to a low temperature any where.

But if Malaria does produce direct apoplexy, as it also often brings on a comatose state which is exceedingly durable, both in remittent and intermittent, and if also it produces, not only local and similar effects on single nerves, but complete hemiplegia, it will be most necessary to inquire whether some of the cases of paraplegia or other palsy, especially as occurring in certain climates

and in campaigns, are not instances of the same nature ; since, whether our practice in such a disorder should be different or not from the treatment of palsy produced by simple cold, the philosophy of physic cannot fail to be improved by discovering causes and assigning distinctions.

The last class of diseases following remittents, and appearing, whether really so or not, to be their produce or to form their termination, are the visceral glandular affections, comprising chiefly those of the liver and the spleen. As the supervening dropsy is generally esteemed but an ulterior consequence of these, though much oftener, I believe, the direct produce of inflammation than it has been thought, I shall not here notice it further. Or rather, I must entirely avoid treating of this disease, in whatever mode it is produced by fever or by Malaria : not that I consider its history to be thoroughly understood, far from it, or the practice as to its several varieties disentangled and clear ; but because, should I attempt to treat every disorder connected with this principal subject, I should write a treatise including a large portion of an entire system of physic.

It is evident that, in certain cases, the remittent has existed before there are any appearances of

the glandular diseases; while it is common for those to show their symptoms most strikingly, after the fever has subsided or disappeared. Hence the not unnatural conclusion, that the injury of the gland is the produce of the febrile action; although it has also been concluded reversely, that the glandular disease is the proper cause of the fever. Thus diversely do different hypotheses cause men to look at one object.

Is it not possible also that they may sometimes be independently associated? The question is a difficult one, but there are facts which would seem to prove that this is the truth, at least in many cases. I observed formerly, that the liver affections of India seemed to be the produce of its Malaria, and the apparent substitutes for that which, in some other situation, is simple remittent, in others again, intermittent; though if they have attracted most attention in that country, it seems, by the report of many physicians, that they are, perhaps, not less common in Africa; while, if they occur also in the western tropical climates, it is less generally and less independently. Here then, acute glandular disease at least, would be an independent effect of Malaria; if indeed it be certain that the attendant fever is not truly the marsh or remittent fever,

modified by this inflammation, or else mistaken, in consequence of the prevalence of an overwhelming local symptom. Thus also, through France, Italy, Sicily, every where, it is common to find, not merely single instances, but a whole population, suffering from glandular diseases in their worst forms; while no fever is present, and while also, in many cases, it seems to be ascertained that no fever has preceded, or that there has at least been no severe remittent or intermittent as the cause. I feel it necessary to make this limitation; partly from the difficulty of procuring accurate information as to individuals, and partly from the fact, that if glandular affection shall be judged the produce of fever exclusively, there are, in such countries, in justification of this opinion, intermittents in abundance, of a character so slight as scarcely to excite the notice of a people to whom the disease is endemic; and where, as every one suffers alike, it is scarcely conjectured that such a thing as health exists, or that all the world is not in the same condition.

But however different physicians may decide this point, whether from their previous views or from more extensive observation than has fallen to my lot, I have met with numerous instances in this country, of diseased spleen at least, and

that to a considerable extent, where patients, sufficiently observant of their healths, in a few instances very remarkably so, and some being even medical men in practice, could pronounce with confidence that no previous fever of any nature had ever existed, neither remittent nor intermittent; though at the time of applying for advice, there were present some of those obscurer derangements of health, or local nervous affections, which I have here classed under the diseases of Malaria.

Thus the subject must rest for future examination; as I do not think even this last evidence completely satisfactory, and feel no inclination to found my own belief, at least, on any thing but evidence: considering that the opposite tendency is now, as it ever has been, the leading obstruction to the progress of medical science; tempting by its facility, because requiring neither labour nor talents, levelling all men, and, in every sense, ruinous to the progress of knowledge.

Such is a sketch, as far as it appears requisite, in the work which I have proposed to myself, of the general character and results of common remittent fever. I need not point out the differences or resemblances between this disease and the fever produced by contagion, or the typhus,

nor again repeat, after the numerous times that I have noticed it in the essay on Malaria, how often the one has been mistaken for the other, and with what consequences: while a full inquiry on this subject in all its bearings belongs to a regular treatise on fever; an investigation not within my plan or limits, nor, for my peculiar purposes, necessary. For what I have thought fit to pass over, I can refer to a thousand authors: but to name titles which any man can read in the *Bibliothèque des Sciences Médicales*, would be the extremity of affectation.

Yet I may perhaps here add to what I formerly said, that the inveterate and common error to which I have just alluded, has probably been the chief cause of an opinion lately promulgated with some energy, namely, that no fever is contagious. It is perfectly true, that when we really examine the great mass of fevers occurring throughout the country, they are not so; but because wrong has been committed on one side, we must not double that error by running at once into the opposite extreme. I believe, myself, that in the present state of society, in England at least, or wherever the lower orders are in a state of decent comfort, contagious fever is in reality very rare, even among them, whatever it may be

in Ireland: but to assert that there is not such a thing as contagious fever, is to discredit evidences as numerous and incontrovertible as science, or human affairs, have ever produced. And let us not forget also, that even in proving the fevers in question not to be contagious, there is but little gained, unless it is also believed that these are in reality marsh fevers, or fevers of Malaria, whence-ever arising: since, to rest in some vague notions of a fever which is not contagious and does not belong to this class, is to deprive ourselves of the means of prevention, and, further, to incur the hazard of a faulty practice, from misconception of the character of the disease.

CHAPTER II.

On the chronic or relapsing and obscure or anomalous remittent.

THE preceding sketch of the common marsh or remittent fever, has been given, not as a proper or full history of that disease, but as an indispensable basis towards the examination of those varieties which may be comprised under the general title of this chapter. To explain those, has been the sole reason for introducing, at all, this branch of the diseases produced by Malaria; as the entire purpose of this essay is, not to repeat what is already known or ascertained, but to explain what is considered as obscure, or as having been neglected or mistaken. Had I not given this previous sketch, I should not have had a point of reference for the varieties in question; and and must often have introduced, as a subject of comparison and illustration, what did not precisely belong to the question under immediate consideration.

To begin with a general view, it is by no means uncommon to find, in our own country, to

which, as far as my own proper descriptions and opinions are concerned, I shall here invariably limit myself, a modification of fever which is, often, little noticed, and very generally misapprehended, while it is a source of great distress. This, as it appears to me, can be referred only to the remittent; bearing the same relation to the definite and severe disease, which the slight but permanent intermittent does to the equally severe and regular ague. If this peculiar variety is sometimes sufficiently severe and marked to be esteemed a fever, it is far from uncommon for it to be so slight as to pass for hectic, for what is called debility (a term without meaning) or for ill health, or delicate health, terms equally convenient to cloak ignorance; while not unfréquently also, it is characterized by the no less convenient phrase nervous, or even brings on the unlucky patient the charges of hypochondriasis or affectation.

To be now more particular, there is a fever not uncommon among us, to which the popular term nervous fever is applied most accurately when it is of a slender nature in regard to its symptoms, however durable it may sometimes be. This is a disease which, with unpardonable

carelessness, as it appears to me, systematic writers, and Cullen among others, have often, perhaps always, confounded with contagious fever under the name of Typhus mitior. It is not, in general, the produce of contagion, and it cannot be communicated. As far as my own observations indeed go, I should say that it never was a contagious disease, nor produced by contagion: but I must not refuse assent, absolutely, to the assertions of other observers of reputation, and am therefore willing to believe that there does exist a contagious or typhus fever of this peculiar and slender character: a possibility indeed to be inferred from the very slender varieties of plague which are sometimes known to occur. Yet when I grant this, I must still express my doubts that a real typhus, produced by contagion, and of this mild character, can ever be a long-continued disorder. In cases where there appears to have been a certainty of contagion, with a mild fever consequential, this has been short as well as slight; and the same is true of the mild plague. Durability, or the property of prolongation, seems to be a peculiar character of marsh fever under all its forms: and until an unequivocal case of contagious fever thus mild and thus durable is pro-

duced, I must continue to believe that all long-continued, or often-relapsing fevers belong to the disorder under consideration.

If I have hazarded these remarks on the typhus mitior of Cullen's arrangement, I am not less inclined to offer similar suggestions as to his Synocha and Synochus; observations which are a somewhat more direct continuation of that investigation which has preceded in the essay on Malaria, and to which I must here refer. I cannot pretend to say that there is not a pure inflammatory fever, as it is called, unattended by local inflammation, which is neither the produce of contagion nor Malaria, and which may be the produce of mere cold or of the other assigned causes which I formerly discussed in the essay alluded to; but I believe that the disorder so called is very frequently a fever of the remittent family, and produced by the same causes; a terminable attack, whether naturally, or through remedies, of a disorder which is as various in its characters and duration as any one in the catalogue can well be. This opinion will at least be supported by those foreign writers hereafter to be noticed, who consider that the intermittent may consist but of one paroxysm, finding also its natural termination, without remedies. With

respect to the Synochus, it is not to be denied that a contagious fever will begin with symptoms of one order and proceed to its termination under the very opposite ones : but where the marsh fever is so perpetually confounded with this species, and when it is so general a character of remittents to commence with a class of symptoms requiring bloodletting, but soon terminating in very different ones, it is to be suspected that the very loose term Synochus has often been applied to these, as it, not improbably, was by the nosologist himself ; whose ideas, practically, as to fever, do not appear to have been very definite, and whose " First Lines," in numerous places, whatever their medical reputation may be, offer most unsatisfactory specimens of reasoning, as well as of the statement of facts, to him whose notions of philosophical writing have been derived from other courses of study than a medical one.

I have already said that we cannot yet decide absolutely, what causes besides Malaria may produce such a fever as that under review ; for notwithstanding what I have formerly adduced in disproof of the other reputed ones, it must be recollected that our present knowledge of causes in physic is really very imperfect, and that the question itself is a very difficult one. It is as bad

philosophy as it is too common, to hasten to conclusions ; and, in physic, it is far too general a practice to forget the pursuit of truth in the chase of an hypothesis. But while I showed, in the discussion to which I have here referred, how easily deceptions may creep in as to these imagined causes, I have also there most fully proved that Malaria is far oftener present than has been imagined. And if the fever in question can sometimes be clearly traced to that cause, its whole character, when carefully studied, is that of remittent fever in its pure and acknowledged form, and in its severer modes. Its duration, and its tendency to critical periods, are the same, and it is rarely if ever without a diurnal remission ; which nothing but neglect will prevent the physician from tracing, though it often does require a minute attention, on account of the want of contrast between the paroxysm and the intermission, arising from the feebleness or small severity of the symptoms. Further, it often terminates in an intermittent as slender and obscure as the original disease : while it also is not unfrequently followed by the local affections of the nerves, such as periodical headach, toothach, intermitting rheumatism, and even marked Neuralgia.

And further yet, while it displays characters which should always have prevented it from being confounded with contagious fever, it is apt to become habitual, or to recur in frequent relapses, even through a long course of years; a circumstance never occurring in contagious fever, and on which I shall have occasion to dwell presently. In this it resembles the analogous intermittent; as in this also, it copies, in some measure, the much better marked remitting fever; while, the methods of cure will be found to correspond, and while further it is not unusual for it to be attended by glandular visceral affections.

Such are the arguments for considering this "low fever," "fever on the spirits," "fever on the nerves," (for by these names also, as well as nervous fever, is it known,) as a modification of remittent, and probably as a fever of Malaria: and if these are not satisfactory, we must perhaps erect a new genus for it; since it can never be truly classed with the only other durable fever that we know, the fever of contagion. Let physicians at least say how we shall dispose of a fever of this character which does not belong to one or other of the two leading classes; since I must confess that I know not where to place it, and am unwilling to go on as

we have hitherto done, without ideas ; satisfied with a term, and, once possessed of the word fever, inquiring no further what are its causes or what its analogies. Physic will never thrive thus ; for thus has no science ever thriven ; while, if I have not here truly pointed out its analogy, let some one else attempt it ; yet through ideas and not words, by means of better evidences than those which are here brought forward.

And it is far from unimportant that this point should be clearly understood ; as it is only thus that our practice can be justly regulated : while it is most certain, that by mistaking it for other diseases, the sufferings of the patients have often been, and are daily and everywhere, materially aggravated. And if the cause, the original one, be Malaria, as in the case of acknowledged remittent, whatever the causes of the relapses may be, we thus acquire the means of prevention ; of which, as long as we mistake its nature, we cannot avail ourselves : while further, if I have here proved that such relapses are often, probably in the far greater number of cases, brought on by incautious exposure to the cause, through ignorance of that as The Cause, and through ignorance of the places which produce Malaria, we have also acquired the means of curing, as it may be

termed, a disorder notoriously troublesome in its relapses ; since, in this case, prevention is cure. If those who still doubt will watch it carefully, they can scarcely, I think, fail to be convinced, if at all capable of observation and free from prejudice ; while some further arguments may perhaps aid in deciding their judgment. One of these is, that it is among those habitual diseases included under the vague term ill health, which are the produce of low and wet situations or of some of the soils formerly described as productive of Malaria ; and I think this will appear the fact to those who will bestow a careful attention on the patient's history as to residence, past or present, and on the soils connected with this which I have stated in the former essay as the causes of fever : while I need not say that such an investigation demands care, very particularly where aught is to be trusted to the patient's own recollections. Another argument is, that its relation to the marked or severe and terminating remittent, in slenderness of symptoms and in the frequency of its recurrence, is precisely that which intermittent, equally slender and equally returning, bears to a limited and severe intermitting fever ; while I may lastly add, as a proof of its cause and return, that if it is especially subject

to relapses in low and wet situations, as well as indebted for its very existence to those, so it is best cured, and especially when relapsing or repeated, or chronic, by change of air; that is, by change to a drier air as it is usually termed, or, what is the fact, by removal from its causes; a circumstance explanatory, alike, of the value of travelling and of migrating to watering-places.

I have here frequently regretted the necessity of commenting on the obscure cases of disease recorded by physicians, and there are few men better entitled to this apology than Haygarth: but the obvious utility, and even necessity of such a proceeding in a work of this nature, is the best apology that can be offered to a sensible man. In the Medical Transactions of the College, this able physician describes as inexplicable, a peculiar state of permanent debility, enduring even for years, and without very marked disease of any kind: and he notes it also as being common in young females, and in the opulent ranks of society. I must not say absolutely that this was or is the disease here in question: but unless where I have readily traced this not uncommon disorder to the abuse of purgative medicines, and occasionally of bloodletting and cupping also, (a circumstance noticed in a future part of this essay,)

numerous instances of this precise nature, or at least agreeing precisely with Dr. Haygarth's description, have been decidedly proved to be the variety of remittent, or fever, which I am describing; while in the greater number, the duration has extended to two or three years, or even more, with intervals indeed of tolerable health, in spite of all common remedies. I shall be surprised if others, hereafter, taking this view of what cannot be uncommon in any physician's practice, do not in future arrive at the same conclusion: but I shall submit this conjecture to the reader's own judgment when he shall have perused the present chapter.

It will now be necessary to describe, as far as can be done, the symptoms of this fever, and most particularly when those are most slight; since these are the very cases where erroneous observation is most common, and is followed by equally erroneous practice.

This disorder may be found, and not unfrequently, with scarcely any marked symptom except mere muscular weakness; a debility on any attempt at exertion, which seems unaccountable, inasmuch as it occurs in persons, even in youth, and apparently strong, and is not very obviously accompanied by any proper febrile



symptoms. At times, not even the appetite seems affected ; and here, almost necessarily, the result is, to suspect the state of the patient's mind, or his moral dispositions, rather than his health ; to suppose, for example, as I have often seen, that a soldier is " shamming," that an opulent female is indolent or affected, or a studious or professional man hypochondriacal.

Yet, let an acute physician watch this disease, and he will be convinced that it is a disease, and moreover a fever. It commences and terminates like the remittent when best marked ; and when it appears to be prolonged for months or years, as is sometimes the case, it will be easy to see that it has had intervals of cure, generally of self-cure, and relapse ; and that, to each relapse, there is a period of weeks, not very uncommonly of six, while the intervals vary from one or two to any given number. Further, either the patient or the physician, or both, must be very inattentive if they do not discover that the paroxysm of extreme debility is fixed ; that it is, in fact, a paroxysm, let its length be what it may, and that there is a diurnal period when it diminishes, or where the patient, who, possibly, could not stand, on getting up in the morning, is enabled to exert, and even to enjoy himself at night.

Hence, as to some cases, at least, the truth of, as well as the reason for, a very common remark, that midnight is the nervous patient's holiday; though there are unquestionably many cases of nervous affection, and even of periodical returns and intermissions in this complicated class of disorders, which do not appertain to a remittent type of fever, or perhaps to any fever. The particular case here quoted, is one, of course, where the paroxysm attacks in the morning and the remission is at night; but while the periods are necessarily various, so are the results, as to the complaints, appearances, or sufferings of the patient. I shall presently trace some others of the more marked of these modifications.

I have assumed here that pure debility may be the sole symptom of a remittent; but it would have been more correct to say the sole obvious one, since it is rare but that the patient at least, if an attentive observer and a good reasoner, and if at the same time free from the morbid influences of the imagination, will not discover other indications of a febrile remittent disease; however the physician may overlook them, from neglect, or perhaps from ignorance, or system; or, as may also happen, from want of sufficient opportunities for personal observation. He more-

over who would discover what he cannot see, by cross-examination, must know well what questions to put and how to present them; or he may remain ignorant, from assuming a wrong course, or else gain the very answers which he has suggested. A leading question is too often as deceptive in physic as in legal procedure.

The obscure symptoms which I am now to point out are those, as might be anticipated, which, whenever they become marked, are also easily discovered; and which, as they gradually multiply, and become also more conspicuous, indicate a more severe disease, gradually passing into a form so distinct, that the character of true remittent fever can no longer be denied to it, even by the most prejudiced. And these gradations of severity, if I omitted to adduce them just now as an additional argument in proof of the true nature of this disease, are, in reality, among the strongest evidences of its argued origin and cause; since it would not be difficult for any attentive physician in tolerably extensive practice, to collect a series of his own cases, rising in exact gradation, from the simplest debility to the most perfect and defined remittent fever.

I noticed that the appetite was sometimes not affected; but, even in the slightest cases, a care-

ful observation will show that it is partial and irregular, or, in common language, capricious. The fact in this case is, that it vanishes during the paroxysms, returning in the interval ; a term which I choose in preference to intermission ; while the common inaccuracy of observation as to this fact, or a diversity of judgment as to the condition of the appetite, arises from a coincidence, or the want of it, between the conditions of the fever and the usually established hours of eating. He whose paroxysm includes the hour of breakfast, may be unable to eat in the morning, while he can dine ; whereas a paroxysm extending till night, may make him suppose that his appetite has entirely vanished ; when, did he attempt to dine, or sup, at midnight, or at some period of the night, should that be the interval of health or abatement, he would cease to make this complaint. And thus it is also, that we meet with cases where the appetite seems unaltered amid considerable disorder ; because, in these, the paroxysm returns at night, and the days form the intervals. Hence a rule in the cure, to be noticed hereafter, which relates to the hours of eating ; and, as will also be then shown, on similar grounds, which equally refers to those of sleep.

It is barely possible that in these slight cases,

the condition of the tongue may be healthy, or nearly so, and that the *primæ viæ* may also be in a state of regular action. More commonly, both are affected in modes too familiar to require further explanation: but these, as belonging to so many other disorders, are seldom of any value as diagnostic symptoms; not seldom also misleading a bad observer, and being considered the cause of disease, of which they are merely the consequences. In the whole catalogue of ordinary practical errors, I know few indeed more common than that which views a sluggish state of the bowels as a primary disease, sometimes also a consequence of theoretic disorders of the liver, instead of considering it what it really often is, the produce of a febrile state, belonging, either to this fever or to some other initiative and similar cause. Nor is it difficult to account for this error, vulgar as it is common; since it is the consequence, partly, of seeing, in a disorder, nothing but obvious symptoms, and partly of that empirical practice for which England is so celebrated, and which, while it tends to blind the judgment, can, from its facility, be conducted by any one; while I need not tell the medical reader to whom we are indebted for its present influence and abuses; an influence and abuses

which, whether they are now increasing or diminishing, are convenient to indolence, by superseding the necessity of thought or investigation, and by reducing the whole practice of physic to an empiricism, to which I know not that its entire history can produce a parallel example.

I feel no hesitation in saying that fevers of this character are a very general cause of the chronic and common derangements in question; and have no doubt that there are many physicians who are aware of this, and that many more will come to the same conclusion when they shall re-examine the disorders of this character under the present views. And consequently, that while these are symptoms of fever, not primary affections and causes of a febrile state, as is the common error under the system which I have been censuring, they may appear to constitute the sole disease, if the other symptoms are slight; just as mere debility does in other cases: ready therefore to mislead, even an attentive physician, and much more certainly the cause of false judgments in those of a reverse character. In this fever, however, as is to be expected, such derangements become, in certain cases, more marked; or, as the disease at large approaches to the more perfectly defined or more severe remittent, there

occur all those circumstances which, as belonging to acknowledged fever, I need not dwell on.

What perhaps may appear most remarkable, is the state of the pulse; and it is the symptom, above all others, which misleads unobservant practitioners. There are persons who cannot conceive a fever without an accelerated pulse: whereas, even in severe cases of remittent, the pulse often gives no indications of any disorder, or the very reverse of what such practitioners would have anticipated. At the very most, the periods during which the pulse is affected are sometimes so very transitory, that it is a chance if the physician should be present at the time; while it is an observation seldom required from patients themselves, though, in such cases, perhaps improperly neglected. Thus it will happen, that in point of velocity, or of character in every way, the pulse may be natural during the far greater portion of the day, while for a period of an hour, or even far less, it may undergo that very peculiar change, consisting in asperity, or hardness, or diminution of size, or feebleness added to acceleration, generally, but not invariably, and sometimes indeed quite the reverse, which marks the commencement of the paroxysm, or the whole properly febrile state; and which is all

that we ever find of what may be called the cold stage, or of the hot one; since these are, commonly, scarcely distinguishable in this fever, and since the former in particular can scarcely be said to exist at all in many cases. And if this state takes place in the night, as does, and not unfrequently, happen, in spite of the well-known remark that the majority of quotidian attacks of fever occur in the day, it may be as unobserved, or even denied, by the patient, as it is unknown to the physician. It is not therefore wonderful, should it happen, that, finding no proper or obvious febrile symptoms, hearing of nervous fever and nervous disease, and witnessing perhaps only nervous symptoms, dyspeptic ones, derangements of the bowels, debility, one, or more, or all, the practitioner who is influenced by a wrong system, or is without any views at all and is merely guided by terms, should conceive himself in possession of a "nervous" patient: acting accordingly, or doing nothing right, with perhaps a good deal that is wrong.

Here also I must remind the reader, that even in well-marked remittent fever, there is often a period of the day in which the pulse becomes slow, frequently falling below sixty; while it is not unfrequently also full, as if under coma, and

while this state is further attended by actual sleepiness approaching to coma, and not seldom, if this is not present, by lowness of spirits or melancholy. The same occurs in the slighter disease under notice, and in different degrees; while being also what is called a nervous symptom, it tends still further to mislead the negligent or ignorant practitioner; him who is guided by a correlative comparison of names and receipts, terms of diseases and the antagonist terms of medicines.

The diseased state of mind may however exist at two distinct periods of the paroxysm, and under two different states of the pulse. Under the accelerated or contracted one, it is a state of peevishness or irritability, attended by the feeling of despondency or not: or it is a modification of the great leading passion anger, which together with fear, the equally inclusive and principal passion, forms those deranged states of mind appertaining to hypochondriasis, which appear under so many modes and modifications. And if under the full and slow pulse, it is commonly simple or passive despondency, or, in extreme cases, despair, so if the opposed condition or passion, irritability or peevishness, belongs to the accelerated pulse, that, in similarly extreme cases,

may amount to anger, or to a tendency to that fundamental passion, easily excited by trivial causes; not seldom, difficult to restrain, even when no external cause is applied, or proceeding to causeless conduct, even in solitude, unaccountable to the patient himself.

Now this mental derangement, be its mode what it may, is a symptom of unquestionable fever; and in the modification under review, where it equally exists, it may be the only symptom visible to a bad observer. Hence another common source of error; and thus is this modification of remittent, when slight, so often mistaken for hypochondriasis as it is, generally, for what is called a nervous disorder. Should there be undisputed fever, then is it nervous fever: and hence probably the origin of a term which has aided in misleading practitioners, and systematical writers too, so long.

Though I shall have occasion to notice these particular mental disorders or symptoms again under the head of intermittent, I must still prolong these remarks here for a short space, chiefly because of the erroneous conclusions to which they lead; while I must also observe, as is also true respecting the whole, that while they are sometimes absent in severer cases, or, possibly,

attract less notice, from the severity of more teasing or painful symptoms, so they are often very conspicuous in milder ones, possibly called into notice by the absence of greater evils, while equally tending to mislead the patient and practitioner.

Despair and fear, analogous passions, are, rather than anger and its modes, the two great mental affections of all hypochondriasis; and hence it is that fear chiefly, often attends the paroxysm of this obscure remittent. This however is true of marsh fevers generally, whether remittent or intermittent, and under all the modes of these diseases. So remarkable indeed is this mental condition, fear, in the disorders of this nature, that in some parts of the Mediterranean where these fevers are endemic, the only name by which they are known to the common people, is *Scanto*; fear or fright. Nothing can express this character more strongly; while it is singularly justified, as I am well informed, by the extraordinary effects on the conduct and opinions of the patients which it produces. Anxiety is but a mode of fear; so that I need not refine on the display of these mental sufferings. This state is, as I have said, most often attached to the depressed pulse, though it also accompanies

a partial delirium attending the reverse state ; or the cold fit. And as the impressions of external objects, or occupation, counteracts these passions, so is it common for them to be conspicuous in the night, even when little troublesome in the day. Hence if these particular states should occur in the night, those passions acquire their full sway ; the observation, as to the occurrence of a feverish fear and unreasonable anxiety at this period, being familiar, when the cause has been overlooked or unsuspected. Moral writers have noticed it familiarly, as well as medical ones ; and were I inclined to quote a passage to this purpose, I know not that I could select a better than from the letters of M. de Sevigné.

In many cases, the morbid state of mind amounts to absolute, if transitory, delirium ; while good observers, accustomed to watch the actions of their own minds, can ascertain that there is often an activity of thought, a hurry, or a confusion, which metaphysicians know to be the approximating condition, but which, as is usual in all slight cases, can be removed by the presenting of other objects, or of subjects diverting the attention ; by the mere act, for example, of introducing a light, or by conversation, should any one be present. This is the delirium

of a febrile paroxysm: there is fever present, from some cause: how many other causes may produce such fever, it is not my business here to say: it is sufficient that it is the produce of the remittent in question, while it is important to notice that if it is sometimes mistaken for nervous disease, as the phrase is, so is it attributed to dyspepsia, or to a presumed hectic fever, the supposed result of imperfect or disordered digestion. It will be for physicians to inquire whether this disease, real enough at times, has not also been imagined to exist when the real disorder has been the one under review.

It is far from my intention to generalize so widely, and so unwarrantably I may add, from one cause, or so to give myself up to one theory, as to suppose that every case of transitory nocturnal delirium, or aberration of judgment, is the produce of remittent fever such as I now view it. Far from it. I do not suppose that our knowledge of the causes that may act on the brain is sufficiently advanced to decide on any thing, scarcely even to infer any thing, as to this subject, with a rational probability. But the inquiry is an important one when the effects are often so serious; and it will surely be a justifiable question, whether among these cases, there may not

have been some which were the produce of the febrile paroxysm of the modification of fever in question, aided, as all those conditions of mind are, by the absence of objects fitted to divert the train of thought. Whatever be the causes, it is a fact well worth recording or recollecting, that some of the most remarkable suicides have been committed on rising in the morning, and in a certain paroxysm of fever, which many persons, who have felt and checked that inclination, have described as attended with confusion of thought, thirst, a tremor of the hands, and other unequivocal symptoms of fever.

To quote noted instances of this nature would be abundantly easy, but it would be painful, and cannot be necessary ; while perhaps, with them, we might safely rank a well-remembered murder, that of Mr. and Mrs. Bonar, where no previous design, nor no purpose to be gained, seems to have existed. It is a subject, altogether, which might be discussed at great length ; but I am scarcely justified here in pursuing it further ; while, as a marked symptom in the disorder under review, it could not have been passed over.

Yet let others reflect on a view of this suspected occasional cause of the highest moral misconduct, which must not be rejected because it is

new, and which I would attempt to illustrate further, did I not think that my readers would be more likely to admit it if allowed to examine it for themselves, than if thus urged on them. If it be a cause, it cannot be unimportant as to questions of medical jurisprudence, in modes that I need not suggest: while, as to suicides, the term febrile delirium should evidently be substituted for lunacy, affording an easy solution in the place of one which is, far too often, expedient rather than just. If it be true also, or indeed were it untrue, but could it be believed and also generally known, it might operate as a salutary restraint on many whose delirium is not so engrossing as to deprive them of all reasoning power, and who in being thus convinced that their false views were the produce of bodily, not mental, disease, and that they would change with the hour and open better prospects, might acquire firmness to resist a temptation which is well known to be often very transitory.

To finish with the affections of mind belonging to this obscure remittent, I cannot omit its effects on the intellectual faculties; though as these are not a very universal possession, their condition is not often brought under cognizance of the attendant practitioner, who ought also to be a person

of intellectual attainments and habits himself, before he could observe their operations in others. That they are variously affected by this disease, I have that assurance from observers and from observations, which admits of no doubt; while it is most essential to remark, that among men whose intellectual faculties are in constant requisition, at all hours, and who are not under the influence of a morbid imagination, or of selfishness as to their personal ease or inconvenience, such effects are sometimes the sole disease complained of. The physician who may be consulted on such subjects, and who may not have attended to this question, may perhaps learn to profit by the remark. It is a remark however which deserves a few more words; since surely there can be no physician, engaged among intellectual patients at least, who has not been assailed with complaints of this nature; though it is to be feared that they are often treated with a contempt which they do not merit. And he who will watch them, will find that they are often very regularly periodical; while a little exertion, or interest in the patient, will also trace, in certain cases, the very febrile disease of which I am speaking: though I must not say that every such periodical mental affection belongs to this remit-

tent. And if such a character in this disorder has always appeared difficult of explanation, here is a solution for at least a certain proportion of cases; while, what is more important, that solution indicates the method of cure. And if, in a disease not much claiming medical aid, such opportunity should not be afforded to physicians, or should they, from want of sufficient intimacy, or other obvious causes, not have the means of investigating it accurately, the patients themselves, with these hints, may learn to trace the real nature of the affection, by attending to the various concomitant symptoms which are here pointed out in so many places, and to the causes whence the original disorder arose and through which it is renewed.

And if I dare not here enlarge much on a subject which would carry me far into the history of the slighter mental derangements, I am still bound to observe, that some very remarkable cases of this nature, which had been attributed to various imaginary causes, and even to a tendency to mania, have proved to be nothing more than these delirious conditions (if such I may call them) connected with a remittent fever of a slight character; while these cases have been most striking in men called on for much exer-

tion : partly because that exertion prevented the suspicion of fever, and partly perhaps because the mere mental labour itself aggravated the symptoms ; calling them at least into more notice. Let those to whom cases of this nature may hereafter present themselves, keep this at least in view ; since I cannot help thinking that it will often be of much service to physicians, and of still more to their patients : while if any one is inclined to suspect this statement to be fanciful, let him investigate the mental conditions of the inhabitants of acknowledged districts subject to the chronic fevers of Malaria, in France and Italy, and even in England, and convince himself that what I have here stated as a disease connected with this cause, is actually so dependent upon it. How widely mischief, or even serious injury, has been inflicted on the patients in these cases, by mistaken modes of cure, applied on wrong views of the cause, will appear in a more proper place hereafter, when the effects of remedies as to good or evil in all these disorders, is examined.

There are two states of mind in this case ; and while they generally occur, both, within the diurnal period, they are also, when duly watched, found so accurately to accompany the states of

the febrile paroxysm to which, even from theory, we should refer them, that we can scarcely entertain a doubt as to their dependence on a fever, and on a remittent fever; whether it shall be granted that I am right or not in referring that fever to the class of diseases under review. When however I say remittent fever, in this, as in any other case where these symptoms have been detached, I must repeat one remark and make another: the first, namely, that the same results occur in habitual intermittent, and the second, that while there are double intermittents, so there are also double diurnal paroxysms in this remittent; in consequence of which, not only the mental symptoms, but all the effects, become complicated, so as to demand consideration, or exceptions, in reading these remarks; as they also often require acute attention on the part of the physician who would make those cases his study. In fact, as I shall have future occasion to notice, the limits between this mild and chronic remittent and the intermittent of the same character, are so very indefinite, in every sense and as to every symptom, that it is only to change the terms, and nearly the same rules apply to both; while we cannot sometimes decide which

of the two names we should give to the disease, and while they pass backwards and forwards into each other, or are interchanged in various modes.

The conditions of the intellect then which I would here remark, are those of torpidity on the one hand and excitement on the other; the first consisting in an inability to think, sometimes attended by confusion of thought, and the other in an excessive flow or crowding of ideas, necessarily, in many cases, attended also with similar confusion, but from the reverse cause. I am much mistaken if both these states are not well known to many studious persons, and most of all to authors; the latter, which may be classed with the state of delirium, being not only friendly to rapidity of composition, but to the exercise of the imagination, provided it be not in excess, while the former is hostile to every thing.

It is for authors and studious men themselves, to investigate from how many causes they are subject to these two states of mind: my business here is merely to show how they are associated with a marked fever which possesses so many other decided symptoms, is so perfectly a remittent or an intermittent, or both in rotation, with a cause to be traced, and with a progress not to

be disputed, that no question can exist respecting its power and action in producing those mental conditions.

In this marked disorder then, the state of torpidity or inability accompanies that condition which must be considered as the cold stage, or which is the commencement of the diurnal paroxysm; being noticed, of course, only when the attack commences in the day and in the hours of labour, and therefore often passing without remark. And in every fever, this is the period of peculiar mental inability; the one observation confirming the other.

The period of excitement, or of increased, if of hurried mental power, on the other hand, is the hot fit, or that which is here its substitute; a period of partial delirium: and here also, that condition of mind which is useful in moderation, is illustrated by the other, or by that excess which causes the imagination to run wild. Reversely, if the opposed condition is also a state of the fever, it is that which, in a higher degree, becomes coma, and in its extreme, apoplexy; yet it must be recollected that inability to think may also be the result of exhaustion or fatigue during the interval, though this is, metaphysically, a very different species of inability from that

which depends on the torpor of the nervous system. These conditions, it is plain, are the torpidity and the excitement of the nervous system, which form two such hackneyed terms in physic: yet while physicians have been accustomed to use them as causes, it is plain that they are but effects: and that, used in the former sense, as they have been, they but lead us round in a circle, explaining nothing. This is the loose and useless language of physic, by which readers as inattentive as the writers are misled: and he who chooses to read what Cullen has written on mania and on sleep, will easily convince himself that I have not stated what is not true; since he will at once perceive that the whole of that, and much more, is a specimen of this encycloidal—reasoning, I ought not to call it. A better logician would have seen that he was abusing words and deceiving himself.

But I must cut short a subject that would admit of a volume, in the usual way of discussing such questions, and proceed to notice the remaining bodily symptoms of this particular fever.

In the very slightest cases, headach may not be present, but it is far more common in women than in men. Very frequently, debility, with headach, constitutes, with that sex, the sole, or

the sole obvious disease: and with these symptoms, alone, or apparently so, the disorder will sometimes run a course of six weeks, and with such severity as to confine the patient to bed. In this case, the act of confinement constitutes it a nervous fever, in the conception of those to whom a bed forms an essential part of a disease. The Man who will not, from temper, or disdain, hold to his bed, is not supposed to have a nervous fever; while respecting the woman in the same disease, of the same severity, there is no doubt. To what judgment the male patient may in this case be subjected, depends on his rank, his pursuits, his opulence, his love of physic, and much more than it is needful to discuss here: but this is the case where the unlucky soldier is found guilty of fraud, as the persevering spirit which will not surrender, and which adds, to the natural debility of the disease, the exhaustion produced by his efforts in spite of it, is the object of another kind of censure to those whose minimum of good sense and good nature cannot distinguish between excess of fatigue, or positive exhaustion, and loss of temper.

Here also, and whenever the disease becomes somewhat better marked, we find the other common symptoms of fever; fits of restlessness or

lassitude, with occasional pain in the limbs, and not uncommonly in the feet and ancles ; and as these are noted or complained of, the disease is commonly judged to be a fever or not. It is, in short, in all its points, when slight, one of those disorders more judged of by the patient's courage or debility of mind than by its own intrinsic symptoms : an excellent rule of judgment, assuredly, and one that is very likely to throw light on diseases.

With respect to sleep in these varieties, it is regulated by all the laws that hold in the more perfect and marked remittent fevers : but as the appearances are generally neglected or mistaken, while they also lead to wrong practice, and as the inconveniences to the patients are not small, they deserve an inquiry before I terminate this account of the disorder.

I must first remind the reader, that a comatose state, or a drowsiness, is a very common symptom in this disease ; occurring also in that intermittent, between which and the disorder that I am now describing, the distinction is so difficult to make. In fact, as I have more than once said, it is little more than a dispute about terms ; as the disorders themselves are essentially the same, and as the same patient, if suffering chronically,

will experience both, in different seasons and circumstances.

This attack of drowsiness, when it exists, generally commences with the paroxysm, and is often the first warning of it; while it is often so sudden, that a patient will fall asleep even in the act of conversation, or may find the greatest difficulty and pain in preventing it. It offers an exact analogy to the more perfect apoplectic state, which is so often the first attack of the fevers of Italy. Sometimes it is temporary, terminating in half an hour, a quarter, or even within one minute; but, while irresistible, those who have experienced it, describe it as more resembling what they should conceive to be the effect of a narcotic poison, than natural sleep. In other modes it lasts for many hours; the patient being unable to rouse himself into a properly waking or active state, while, at the same time, he cannot procure even a minute's real sleep; the bare attempt defeating his object. All those who have suffered this symptom from the chronic fevers of Italy, describe it as extremely distressing, and as one of the most vexatious parts of their disease; and I need scarcely point out to medical readers, that while it may rank under the *Quotidiana soporosa* of Sauvages, they may find abundant mention of

it in medical writers, at least in cases of severe or marked fever, though it is so often overlooked or mistaken in our own country. Even in foreign writers, I must however remark, I can find no decided view of this disorder as appearing in a fever of this slight character, or in one, of which, while the proper fever is easily overlooked, this constitutes the only very marked symptom. It seems to me, on the contrary, that it is generally confounded with a simple and primary disease, if indeed there be such a disease which is truly independent.

The error to which I allude is that of calling it by the vague term Lethargy, and it is often an error of a very serious nature ; since, among vulgar or unobserving practitioners, it leads to the practice of bleeding or cupping ; remedies which, in general, materially aggravate the chronic disorders of this nature, sometimes even inducing real palsy : or, as is also not unusual, it is judged a reason for courses of purging and of abstinence, similarly injurious, if less actively mischievous. There can hardly be a physician who has not met with instances of this nature ; while, not occurring necessarily in corpulent or aged patients, and the fact indeed being often quite the reverse, it might at least be conjectured that it

did not arise from that cause, excess or misdirection of the circulation in the brain, to which such diseases are vulgarly attributed.

Now, it may happen, as with respect to debility, formerly mentioned, that this drowsiness will be the only conspicuous symptom of the chronic fever in question; and it is most frequently so in those who are not of a complaining character, not given to watch their morbid sensations, or who are under the necessity, or in the habit of exertion. And if, in such instances, it is thus the only conspicuous or obvious disorder, it is so because it forcibly commands that attention, from its interference with the actions or occupations of the patients, which the other symptoms, if present, do not. It will rarely however happen, but that a watchful physician, accustomed to observe and reason, he who is habituated to the analogies and generalizations of philosophy and is not the mere slave of terms, will trace other symptoms, sufficient to convince him of the real nature of this imaginary lethargy. He will, or he ought to observe its periodical attacks, and he will also generally find that other periodical changes attend it: he will trace a periodical change in the pulse; and, what is perhaps as decisive as any symptom, though it is that which is especially neglected, he

will be able to discover the commencement of a paroxysm in the altered physiognomy of the patient; in a shrinking of the features, especially of the nose, and in a corresponding paleness of the skin, similar to that which commences the cold fit of an intermittent. Whenever this disease is found in a patient who has been habitually a sufferer from decided remittent or ague, that alone ought to prevent it from being mistaken.

I could easily fill pages with cases of this nature, as of others, illustrating every modification of this disease which I have described; but while this would be to occupy room, it would add nothing to the evidence which the generalization presents. In all instances, the evidence afforded by cases can be no greater than that which is deduced from them by the recorder's own generalization: while reversely, in both, in the particular as in the general, incapacity for observation, prejudice, or *mala fides* will equally vitiate the testimony.

But I cannot pass from this symptom without briefly pointing out, though it rather belongs to the cure of these diseases, the mode in which erroneous practice often confirms the false conclusion, that such a disease is that which medical writers have called lethargy, and associated with

the purely apoplectic and paralytic disorders. I shall hereafter show how, in all these diseases, the practice of bleeding leads to paralytic and permanent affections: and while this is also one of the proposed remedies for lethargy, it is easy to see that when the sequel is palsy, the original error will be confirmed; when the very practice itself has been the cause of the evil which it was intended to prevent. Of such events, I have seen cases enough to convince me that they are not of uncommon occurrence.

To proceed to the state of natural sleep in this disease. It is common for it to be irregular or disturbed; variable, or unnatural as to the period, or interrupted inconveniently. In these cases, it will be found that its irregularities depend on the period and proceeding of the diurnal paroxysm, though the appearances are various and often intricate. Hence, it is protracted beyond the usual period, or the patient is unable to sleep till a late hour of the morning, or else is awaked at some hour of the night with his sleep unfinished, being under the necessity of repeating it after the interval of watching has passed away. In this latter case, that confusion or hurry of thought already described, amounting nearly to delirium at times, is not uncommon: and it is also remarkable that

the hour of morbid awaking will, through long periods, return with the utmost punctuality. This indicates the connexion with the paroxysm of remittent here noticed; while the proof is completed by this fact, that while, in the chronic cases of remittent and intermittent, the hour of the attack will remain unchanged, even for a long course of years, or for life, so does the hour of awaking under this modified disease, remain equally constant. One case, which I shall briefly state, will illustrate sufficiently what I could elucidate by many more.

In this, the patient had, for thirty years, been subject to nearly all the diseases in rotation which I here rank under those of Malaria, namely, to remittent, to intermittent, and to almost every known variety of Neuralgia; having apparently acquired the incurable habit of these disorders at an early period of life. In several long intervals among those more marked ailments, the same person had also been affected, for long periods, with simple coma or drowsiness, and further with nocturnal awaking in the state of partial delirium just described: and it was his invariable remark, that the hour of awaking in this manner, was always precisely the same as that which marked the paroxysms of the intermittent

and those of the Neuralgia, indicating their joint dependence on one cause and one habit; while that hour scarcely ever had varied by many minutes during the whole of his life of disease.

I am not about to deny that similar symptoms occur, possibly from mere habit, and that they happen in many febrile and nervous diseases where the existence of remittent cannot be suspected. But as they are portions of this disorder also, it was necessary to notice them; particularly as they seem to have met with very little attention as such, and as a discriminating knowledge of the cause is important in determining on the mode of cure.

In any cases of this nature there is a remark which I feel bound to make, be the cause of the disturbed sleep what it may; as it is a fact on which the comfort of patients of this class materially depends, and as the popular opinions in this case are often rendered very oppressive to them, implying also, as they do, a proverbial piece of vulgar morality. It relates to early rising, presumed to be peculiarly salutary; as the contrary practice is even held to be immoral. Thus is the unfortunate invalid, who, from whatever cause, is subject to a late period of sleep, or to interrupted sleep, condemned to square his life and risings by the

rule of those to whom ill health is unknown, as, among them, it is doubted or despised. And thus also do conscientious or timid or superstitious persons impose this law on themselves, with consequences which all those who have submitted to it know but too well. Of these consequences, the chief are, inability for exertion generally, and for thinking in particular, during the remainder of the day; when the cure, or prevention, would have been found in following the obvious dictates of the feelings, and in sleeping through that period in which exertion of any kind is injurious, or while the peculiar febrile state is present.

This would be the real economy of time, if that be the motive; and it is, no less, economy of health, as it is avoidance of suffering. But not until those reasoning faculties which are thought to distinguish man from the inferior animals shall really become the general property of men, will it serve any end to say that *he* is the early riser whom a sound constitution has destined to a long life, and that it is not *because* he has risen early that he sees the borders of fourscore. A still harder task is his, who, in addition, has to encounter one of the proverbs which serve the purpose of evidence and philosophy equally, to the

vulgar, great as petty; still more, who would oppose that superstition which conceives itself to be religion, and that latent but ever-active asceticism which imagines the voluntary infliction of pain a merit.

It is to be expected that the *primæ viæ* should be deranged in this disease, as I have already remarked; but while I did not choose to dwell on what seems always to possess a peculiar attraction for the multitude of writers and practitioners, I must observe that where the visceral glands are affected, as is very usual in cases of a chronic or repeated nature, such events are peculiarly to be expected; while, on such a subject, the reader may easily refer to numerous treatises respecting those glandular diseases; as I do not intend to include any account of them in this essay, for the reasons which I assigned, when speaking of dropsy formerly.

Whether connected with that state of things or not, I must however offer some remarks on what is called dyspepsia; a Protean disorder, as it is commonly apprehended, and one which is rarely absent, in some form, from the chronic remittent and intermittent. It is not here my business to enter on the consideration of dyspepsia as a disease, nor on that of all its possible causes: it is

sufficient if it is here a symptom and a produce of the disorder under review ; while, being so, the fact is important as connected with our practice in it.

That it is actually so, every man's observation may satisfy him : that it must be so, if the great glands are affected, every one would anticipate ; so that this consequence requires no further illustration. But it is important to show how it arises in the simpler fever, where those diseases do not exist ; because we are thus led to a method of cure, or rather, of prevention.

In every fever, and in the remittent of course, the stomach is in a disordered state ; while where the interval is perfect, it recovers its powers, totally, or partially, as it may happen, during the cessation of the paroxysm. I ought also however to remark, to prevent cavil or error, that in all these fevers, whether severe or slight, the affection of the stomach is very various ; as it appears, in some cases, to be the chief organ suffering, while in others it may almost escape, and even where there are no differences in the severity of the fever to justify these different conditions. Like much more, it is, probably, rather a local disease attached to the primary one, by means of collateral and connected causes un-

known to us, than an inherent essential symptom or portion of the total morbid change. But since I have, in another place, given the remarks of French writers on the direct production of dyspepsia from Malaria, while I have, in noticing the theory of remittent, pointed out the inflammatory state of the stomach, and while I need not, to medical readers, describe those severe affections of this organ which take place in the remittents of the tropical climates, it is here unnecessary to dwell on facts or illustrations which are either independent, or very materially so, of the particular modification of this disorder under review.

The point now to be remarked is this, that while, in the decided remittent fever, the digestive powers may recover during the interval, yielding under the paroxysm, so a similar effect often takes place in the chronic and gentle remittent; or in the disease under consideration. And in the severer disease, if it is not attended to as it ought to be, all physicians of any observation must know, that if food is to be given, the interval, and even its first moment, ought to be selected; that the digestion may, if possible, be completed before the return of the paroxysm: and that to allow it during that stage, is not

merely to defeat its object, but to increase the fever, and often to lose the remission, or render the disease continuous.

The case is precisely similar in the chronic or mild disease under review : but the obvious result in this case, is indigestion, with its usual train of symptoms ; as the ordinary conclusion also, by the physician who does not know the disease that is present, is, that the patient is merely labouring under dyspepsia.

Thus does remittent in this form, to vulgar eyes, put on the mere character of dyspepsia ; since, as in the other cases, the other symptoms may be neglected, and from the same causes ; which I need not again repeat. Nor need I repeat how the diagnosis, as physicians term it, may be formed in this case ; though it is important to remark that the cure, at least to a certain extent, will be found, as I formerly hinted, in merely varying the hour of eating ; selecting, of course, the interval, or the diurnal period of health, be that what it may. The patient's own feelings or appetite in this case, will often be a sufficient guide, where better are wanting : while it is plain that, in such instances, the established habits of society in regard to eating, must often be broken through.

If I could prove that this is a correct view of a certain proportion of the cases of imagined dyspepsia, by means of specific histories of such, this is another of the instances also in which such evidences would be superfluous, and for the same reasons. Let physicians watch their own cases of this disease with this new light, and they will scarcely fail to find evidences of their own which will be much more satisfactory. And they will recollect also, when they reflect on their practice, how often they have found dyspepsia periodical under diurnal returns of various kinds, how often periodical and dependent on seasons, how often they have seen it cured by merely altering the hours of eating, how often by bark, or by arsenic, or by the other tonics that cure the remittent and intermittent diseases; and how often by change of air, as also by mental affections, or causes operating on the imagination, such, among others, as the change of physicians; all of them remedies for the intermitting diseases in question.

I dare not enlarge on this view, important as it appears to me; since were I to pursue the illustration of every disease which occurs as a symptom in the anomalous or obscure fevers arising from Malaria, I should write an universal treatise of physic. Yet amid all the treatises,

almost numberless, which have been written on dyspepsia, this is a mode of contemplating it which I have not found; while I need only say that any one who will reflect on those circumstances appertaining to it which I have just suggested, will see that they can all be explained by the theory here proposed, while there are few that admit so easy an one, and some that will scarcely admit any other. Of the very numerous real causes of this common disease, I cannot pretend to give even a catalogue, as that would be to transgress my plan; nor could I therefore enter upon any comparative view of the predominance of these several causes, or attempt to suggest what place the one here proposed may deserve among them. As far however as utility is concerned, it will be sufficient if physicians shall become aware that there is such a cause; while the method of ascertaining its presence will scarcely now be difficult to a careful practitioner.

I must now notice the occurrence of hysteria as one of the symptoms occasionally attending this fever; because, though rather an incident than a portion of the disease, it is important that it should be known to practitioners to arise from this cause, more generally than it appears to be.

In the better marked remittent fever of this mild and tedious character, it is not an unusual symptom; and if, as is probable, it is most common in women, it occurs in both sexes. That, with such a symptom, the terms nervous fever, and fever on the spirits, should appear well applied, is not very surprising: but as humanity or compassion to the sick, from those who are well, is not one of the most prevailing of virtues, and as any disease usually associated with debility of mind in the common estimation, is a general object of contempt or censure, it is not uncommon for the whole disease, even in this case, to be attributed to feebleness of mind, a nervous constitution, or any other cause which may justify that contempt with which the diseases called nervous are so commonly treated.

In the severer, or more strongly characterized remittent, or low fever, (to adopt this popular term,) where the general febrile symptoms are sufficiently marked to admit of no dispute, while there are generally present most of the ordinary symptoms called nervous, the occurrence of the hysterical paroxysm, which is rarely more than a fit of crying, is commonly as regularly periodical as any other portion of the disease. I am not however quite satisfied respecting the part of the

febrile paroxysm to which it belongs; but have generally observed that it attends the subsidence of the pulse, and therefore, that it occurs towards the end of what would be the hot fit, or at the termination of the excitement, were that stage well marked, which it very often is not.

Now, on the other hand, it often happens, that either the fever has so far subsided that no marked symptoms of it remain, or that it has originally been of so slender a character as to attract little notice, as fever; particularly should the patient be of a courageous disposition, and determined to affect health as far as possible: while there are also cases in which it really is extremely slight. Yet even in those states, the same paroxysm of hysterical weeping or feeling will occur; while I have observed, in some cases, that not only it is the only part of the disease which the patient's efforts cannot resist, but that it is often rendered additionally certain and conspicuous if he has made efforts to conceal the febrile paroxysm, or to exert himself under it. A long-continued attempt at exertion, or at concealment, which is exertion, is, in such cases, generally followed by a hysterical affection unusually severe.

In females, if other nervous symptoms are

present, and if there are especially that despondency and irritability which I have shown to belong to this fever, and if, further, the attendants are prejudiced and the physician ignorant or careless, such cases are sometimes considered as purely nervous, and, consequently, very commonly maltreated. Whether they may be common cases or not, I must leave to the observations of others; as respecting these, my own opportunities have not been exceedingly numerous, though far more than sufficient to establish the fact; while I shall also leave it to the consideration of others, to judge hereafter, when I shall take an opportunity of referring to authors, whether the cases of periodical hysteria thus recorded, do not belong to this disease, far more extensively than in those instances which such systematic or casual writers have quoted, and whence Sauvages has erected his variety of *tertiana hysterica*. As far as I can perceive, such hysteria has been noticed under this head, only where there was a proper and perfect intermittent; whereas, according to this view, it may be the only very visible disease.

Thus I have enumerated the leading and conspicuous symptoms of this modification, or of these modifications or varieties, of remittent fe-

ver, as far as they may be considered general ; reserving those which seem more properly of a local nature to another division of this subject : though with regard to the stomach as affected by dyspepsia, that might also have found its place hereafter, since I must reserve that affection of this organ which consists in vomiting, to that future place. Unfortunately, such is the character of the stomach and its diseases, that the latter may often be considered equally in either light.

I have now therefore only further to remark, that it is one of the effects of this remittent, particularly when chronic or habitual, to produce those general derangements of the entire health which it would be tedious and equally useless to enumerate, as they are familiar to every one ; while, with that, the temper, and even the moral character, as it may be considered, become also permanently or habitually injured. This, however, I shall have occasion more particularly to notice under the head of intermittent ; and I shall therefore terminate this part of the subject with pointing out one effect, in females, which especially demands notice ; because it is far too common to overlook its causes, not only in this case, but in many others, and to treat as an ori-

ginal disease, that which is only a consequence of others.

I allude here to menstrual errors, which may be of any nature, while the more common are dysmenorrhea and amenorrhea; the latter in particular being frequently attended by a chlorosis which has often been mistaken for an original disease, as I have witnessed: most especially, of course, in those cases where the accompanying fever was slight; while the deception is, further, easily maintained by the existence of headaches, equally belonging to the proper fever, and not to this local and secondary disorder. On those derangements I need make no further remark, than to request practitioners to inquire sedulously into their causes, and more especially respecting the one under review, (since this is the only part of that subject which is under discussion,) because, on this, the cure must be founded: and further to reflect, that they are, in themselves, much more commonly the results of some derangement of the health, than the sources of that ill health by which they are accompanied, and which is generally attributed to them. It is a subject however which will necessarily be noticed again when speaking of the anomalous intermittents: while this unavoidable necessity of almost re-

peating the same statements in two different places, because of the division of marsh fevers into remittent and intermittent, together with other consequent disordered arrangement which I have been unable to avoid, inclines me often to wish that I dared have departed from the common usage of physic on this point, and treated, as one whole, things which are not essentially different.

If I have now sufficiently described this modification of remittent fever, as I consider it to be, through its obscurer modes and symptoms, and if I have also given such distinctive characters as shall enable any one, with a moderate degree of attention, to recognise it, I have hitherto spoken of it as a definite disease, occupying the usual periods of other and more severe remittents. This was necessary for the sake of distinctness, and that it might the more easily be compared with the ordinary and acknowledged remitting fever: but it is a description that will seldom apply in practice, as far as the duration of the disease is concerned; and, on this point, I must now proceed to offer some remarks.

Let me also here premise one observation, which, though already made, requires to be stated more distinctly and forcibly. This disease, in

actual practice, is commonly of long duration, as I shall soon show ; while it frequent follows a severe attack of decided remittent, or an equally distinct one of quotidian or double tertian inter-mittent. It happens also that, according to season, or from the nature of the exciting cause of a fresh relapse, or from other circumstances, possibly not very apparent at present, it puts on rather the appearance of an intermitting than a remitting disease : the intervals, or intermissions, being perfect, perhaps long, while, further, there may be a distinct cold stage, however short, at the renewal of each paroxysm. Thus might it equally have been classed under the head of chronic intermittent with the quotidian type ; though had I treated of it there, they who may now know it, or hereafter remark it, as a remitting disease without cold stages, might equally complain that I had misplaced it. There was but a choice ; and I have placed it in the division to which I have found it most frequently conform : while it is plain that the dispute, should it arise, is not worth entertaining, inasmuch as the whole is but one disease under different modifications. It is, in short, the chronic febrile state, or fever, or fevers, which attend the unfortunate people who reside in the pestilential coun-

tries described in the essay on Malaria : putting on an endless variety of appearances, from which I have attempted to condense, as far as lay in my power, a general description adapted to the majority of cases, or at least capable of serving as a point of reference for disorders which differ in almost every individual. It is, in reality, the chronic marsh fever ; approaching, on one hand, to the acute and regular disease, and, on the other, to that undefined condition of the same nature which is so often called, simply, ill health : while, as to type, it maintains the same gradation of character ; being continuous, in a limited sense, or remittent, or intermittent, just as are the severe marsh fevers to which it is affiliated. I am utterly indifferent where it is ranked, provided it be understood, for the sake of those who are its victims.

But if I here expose myself to criticism by professing my inability to decide whether this disease should be ranked with quotidian or double tertian, or else with remittent fever, I shall at least coincide with those who do not admit the existence of quotidian ; while I am but in the same condition as those who invented the term *hemitritæa* to get rid of this difficulty. Sydenham, Strack, many more, even including

Celsus long since, seem to have felt similarly on the subject, though their remarks apply to an acute and severe, and not to a chronic or slender disease. But I have already said that these are often distinctions without differences; and since remittent and intermittent are virtually the same disorder, we can only smile at the verbal refinements of those who, unwilling to abandon the term intermittent, say that its accessions may be protracted and confounded, and that it can thus become, deceptively, even continuous. Let us not split the hairs of logic on these subjects, now that we have shaken off the weight of the schoolmen in so many other matters.

As I observed just now, the disorder in question is a frequent termination of a severe remittent, or of what is called a nervous fever; as it also is the sequel of a marked quotidian, under which I here include the double tertian. Such a remittent may terminate in a curable intermittent, or in the chronic one so difficult of cure; but it will also subside into this particular disease, a copy of the original as it may be termed, but on a reduced scale. While the severe intermittent also, of whatever type, may terminate in a chronic one of the same character, the quotidian may similarly become chronic; continuing well mark-

ed, or else, by losing its cold fits and acquiring less decided intervals, ending in this chronic and mild remittent, so difficult of cure, and perhaps, of all the terminations of this disease, the most distressing, from the almost uninterrupted state of disorder, both in the bodily and mental faculties, which it maintains.

In such cases as this, and when the patient's history can be traced, as it almost always may, with care, it is highly discreditable for any physician to mistake it for any of those diseases, bearing the corresponding collateral symptoms already described, which resemble it in those particulars : or, as is the fact, to mistake the prominent symptom for the real disease, negligent of its cause and origin. Yet is this a daily error ; as he who has watched medical practice will soon discover, or as he who has trod the routine of names will even discover in his own practice, if he has only talent to observe, when the right path is pointed out to him, and but candour enough to acknowledge his errors to himself. There is somewhat more of excuse when, from the beginning, the character of the disease has been mild ; though even here, no one who can commit the error, deserves the name of a physician ; if, to be a physician, is to be the philoso-

pher which it was once supposed. He whose very science is the most obscure under the guidance of analogy, and whose knowledge, therefore, without an eye for analogies, is nothing, must be satisfied that he is but a practising artist, a man of receipts and names, if, under analogies so simple and obvious, he is unable to perceive what are the facts before him, and what their connexions and causes.

Let me still point out one or two of the most common modes under which this disorder appears ; or rather, some of the most ordinary misinterpretations to which it is subjected ; since thus, perhaps, shall I best explain to others the views here taken of the diseases which they see and do not look at in the same light. It is in vain to describe any thing, unless we can bring it before the eyes of others by placing ourselves in the same position as they may be ; and, with some more, the following are perhaps the most common appearances and conclusions among those whom it would be unjust to censure for not studying a science, when all which they profess to do is to practise an art ; or, as a harsher criticism has often said, to conduct a trade.

It is remarked, that after a severe fever, certain patients become “nervous and ailing,” as it is

termed, for a long period ; and the vulgar opinion then is, that the constitution has "received a shock," or that the brain or the nervous system has been injured, or any other convenient reason of words. It is also remarked, that certain persons are very subject to slight fevers, that any little irregularity produces a fever, and so on ; while of others yet, suffering less from this cause, it is merely concluded that they have bad constitutions, or ill health, or are nervous subjects, or much more that I need not be at the trouble of repeating.

Now, in the case where the "nervous fever," as it is called, has preceded, the imagined injury to the constitution is merely the relapse, or series of relapses, to which remittent is subject ; or it is the mild disease already noticed, in a chronic or habitual form. The debility, the affections of the mind, the febrile symptoms, the nervous ones, all this and more, are the symptoms of the fever itself, and nothing else ; and assuredly did they depend on a "constitutional" cause, or were they the effects of organic disease, the constitution might well be supposed injured. It is doubtless injured, and materially so, should the visceral glands be diseased, as does sometimes happen in these cases ; but all the appearances of disorder

in question may exist without that; while these disorders, whatever other evil they may produce, can scarcely be the causes of what may equally exist without them, and are assuredly not the exclusive ones. Thus also, possibly, may the nervous system, that is, the anatomical structure, or the functions of the brain and nerves, be permanently injured; though, as we have at present no knowledge¹ of the nature of such injury from anatomy or physiology, we cannot reason respecting it; while we further know, that the mere disease in question, while in action, will produce, temporarily, the effects that might be attributed to a permanent derangement of the nervous system or its functions.

The facility of suffering from fevers, repeatedly, and from slight causes, or a habit of "taking fevers," will be found to be nothing more than the chronic disease in question. It may be so acquired *ab initio*; or, every fever, from the commencement, may have been a slight one, while the disease does not become the less chronic or habitual: but a careful examination will very often discover that the original attack has been a well-marked one, or that the mild fevers are the repetitions of a severer original disease. The case is the same as to constitutional bad health,

debility, dyspepsia, nervous disorders, or what not, generally referable, with care, to some previous fever; while, in almost all these cases, (presuming of course that the causes are those here under review,) a watchful eye will discover the periodical character, or the other diagnostic symptoms, past or present, which have already been pointed out.

And further, in those disorders, an examination of the patient's present or former residence, or of the places which he has frequented or visited, will often also enable the physician to trace the origin of such affections to Malaria; confirming what the symptoms may indicate, or, sometimes, even proving what their obscurity or that of the patient's narrative may have left in doubt. It is very often with this narrative that a physician will have chiefly to contend; so deficient is the multitude in observation, and so incapable of even explaining that which, to those who do not reflect on the ignorance and inaccuracy of mankind in general, would appear abundantly easy. And if in attempting to give the natural history of Malaria, I have so often inculcated the necessity of carefully studying the obscurer sources whence it may arise, so often maintained that this knowledge formed an essential portion of

every practitioner's acquirements, here, among many more, is one of the cases where a perfect knowledge and a discerning eye as to this subject, will become an important auxiliary in the formation of a diagnosis, as physicians term it.

One remark more on popular errors respecting this disease, will be useful, before proceeding further in the account of it. It is a very common observation, that persons who had suffered much from ill health in youth, or at a certain period of life, recover, and become stronger and healthier than even before. I do not here pretend to enumerate the various disorders under which such a state of things may occur; but I have succeeded, in many cases of this nature, in tracing the cause to a chronic fever of this character, persecuting the patient during the earlier years of life, and often, for an extensive period; as happens in chronic tertian and quartan: diseases, like this one, which, in after life, disappear, or are cured, by remedies unperceived by us, or by revolutions in the constitution of the subject.

And this particular fact, the subsidence or disappearance of marsh fever at a certain age, whether merely chronic or intermixed with acute attacks, is one of the circumstances remarked of all the insalubrious parts of France and Italy:

where the period from thirty-five to fifty, as I observed in the essay on Malaria, is the period of trial, and where, if this is once passed, the individual often attains old age. And for the sake of those who prefer facts from our own country, it will be found that the same rule holds in Hampshire, and in the other districts subject to the fevers of Malaria, wherever these become chronic, or attend the whole of life, as they do in the countries just named. These are cases without dispute, or which at least ought not to be disputed; because the connexion is apparent and the causes obvious: in those to which I allude, the causes are the same, and so is the disease: but these are the instances in which both the causes and the nature of the disease have been overlooked or mistaken, from the general inattention and ignorance respecting this whole subject, so often here pointed out.

Reversely, let me offer an analogous remark on what has been called the climacteric disease; and if I should here appear to be infringing on the rights of Halford, as I must seem already to have done on those of Haygarth, by offering an explanation of his cases, I must not be understood to say that the cases of disease under this term, which he has noticed in the same transac-

tions, were themselves instances of chronic remittent or intermittent, but that I have seen patients whose ages and disorders corresponded exactly to those which he has described, that these had been considered the climacteric disease, or, as I have elsewhere noticed, a "breaking up of the constitution," and that they were proved to be the fever in question, misapprehended, and, commonly, long, also, overlooked. Other physicians may consider this subject, and decide whether they have not, sometimes at least, followed Halford in this opinion, and whether also, they may not have sometimes deceived themselves.

Supposing this disorder, which I may perhaps safely call the chronic remittent to have been once established, from whatever original cause, its duration and character are, both, various; so various, that to describe them all, or to adduce cases for the purpose of illustrating them, would prove insufferably tedious. To notice some of the more ordinary and prominent characters of such varieties, will, I hope, suffice for forming a ground of judgment respecting the existence of the disorder; and the rest must be trusted to the discernment of practitioners in applying these general principles.

Though it does happen that this disease, whe-

ther as a marked fever or a merely inconvenient and almost undefinable feverish state, will appear to endure for many months, or even years, it is more usual for it to consist in a series of distinct attacks, or of relapses, with intervals of health, or of something like health; since, when the intervals in particular are short, the patient is seldom restored to his proper vigour, and is seldom also without some inconveniences. This I already remarked of the better characterized "nervous fever" or chronic remittent; and it is equally applicable to the most slender or scarcely discernible affections of the same nature. But the state of interval between any two periods of the disease is not very conspicuous when the recurrences are themselves slight in character; as there is not then the contrast between marked good and bad health, or between the more disordered condition and that of imperfect recovery, which renders the assignment of the disease, in the opposite cases, comparatively easy. Thus it will often appear, that there is a continuous disease enduring for long periods; while this may sometimes be the fact, in reality; or else the intervals may be so short, and the recurrences so frequent, that they can scarcely be defined.

Supposing, on the other hand, the reverse case,

or a recurrence of decided intervals with relapses, one of the simplest and best marked, is that where the patient, in the vulgar eye, is subject to fevers, as it is called. In such cases, there is a distinct fever, running a regular course, though, as a fever, commonly slight in character, unless under gross maltreatment, and terminating in health; when, after an interval varying from weeks even to months, it returns, from a distinct cause or not, again to subside into health.

In these cases, by no means uncommon, while there are endless varieties in the lengths of the intervals, the duration of the fevers, or relapses, also varies; though, as far as my experience has gone, the longer are more common than the shorter ones. Thus I have more frequently seen periods of six weeks than of one; although, even in the same patient, it will happen that successive relapses will put on every period of duration to which a single attack of this fever is subject.

When, now, the relapses or returns occupy the longer periods, such as that of six weeks, or a month, while the intervals are short, extending, as is not unusual in the worst cases, not beyond a week or a fortnight, and while in such cases the patient, particularly if debilitated by a long continuance and frequent repetition of the disease, or

naturally of a feeble constitution, has scarcely time to recover his health until the next attack comes on, he often appears, both to himself and to his physician, to labour under a continued state of feverish bad health, or even of absolute fever, lasting through many months, and even through years.

These then are opposed extremes, as to recurrence in this disease; and, between the two, there will be found, in practice, innumerable varieties, which I need not detail. And however obscure, however even mysterious, such a state of disease, continuing so long, and producing no ultimate bad effects, may appear to an ignorant or inattentive physician, a more watchful reasoner, he who applies philosophy where others follow blind rules, will rarely if ever be at a loss in tracing, not merely the relapses and their intervals, be they as obscure as they may, but the diurnal variations of the disease itself during the continuance of the proper accession.

With respect to the duration of this relapsing or habitual remittent, it is as various as every thing else; as various as that of the chronic intermittent, be it tertian or quartan. I have seen it last one year, two, three, twenty; nor is it more wonderful, doubtful as the fact, thus stated, may

appear to those who have not studied or known this disease, that a quotidian periodical fever, be it called quotidian or remittent, should last twenty years, than that tertians and quartans should be equally permanent; as they are well known to be. And if any physician should doubt this statement, as, personally, I have found it doubted or denied by every one with whom I have communicated, I must again refer to France and Italy for the proofs: since this is exactly what happens to all the wretched inhabitants of their pernicious districts, whose condition was pointed out in the essay on Malaria. And there is the same reason for its occurring in our own country, if all that I have been attempting to prove is established: while, in truth, it is known, or may at least be seen, by any practitioner in our fenny counties who will make himself master of this subject as I have been discussing it.

Of the causes that may render this fever thus durable, I have formerly mentioned a residence among the sources of Malaria, or, as it is popularly considered, in a damp or an unhealthy situation; or the frequent exposure to such causes, from ignorance or necessity. And we can now see more distinctly, the importance of the cautions laid down in the former part of this work re-

specting soils and situations; since this is the "bad health" of which they are the ordinary cause, and since it is matter of ample experience that the avoiding them is often the only method of curing the disease, though, when long established, even that often fails.

Besides this original cause of all the evil, however, numerous other causes inducing debility will reproduce the relapse, and thus tend to perpetuate the disease; and the more readily as it is a more confirmed habit. Such are ordinary cold, fatigue, intoxication, bleeding, the excessive use of saline purgatives, mental affections, with others unnecessary to name; all of them equally efficacious in recalling the returns of a chronic tertian or quartan. Of all those causes, I would particularly notice here the use of purging, and mental affections; as, respecting the other, no one doubts much, and as they are commonly avoided. That what is called "a course of salts" will very often reproduce an attack, I have abundant proof; and it is especially necessary to notice this, since it is commonly resorted to as a remedy for the imagined diseases to which the symptoms of this fever equally belong. Hence the frequently injurious effects of that fashionable folly, the frequenting of mineral wells; a practice re-

sorted to by presumptuous patients, or by vulgar practitioners, as if it must be universally salutary and was incapable of doing harm. And the common error in this case, as it is the especial cause of this erroneous and pernicious practice, is the mistaking the derangements which I formerly noticed for dyspepsia, as it is called, or liver complaints, or whatever else, under this received phraseology which is now so current; while the empirical practice to which I then alluded is applied without examination.

The mention of bloodletting also induces me to offer, here, another caution on that subject, (though it is a question which will be fully examined in treating of the cure) should local pains, not unusual in this disease as I shall presently show, appear, in ordinary hands, to justify it; since by this error, here as in chronic intermittent, the disease is invariably aggravated, and commonly prolonged or perpetuated; too often also with the addition of many other distressing symptoms. As to the influence of mental affections, it is rather a matter of curiosity than use, as the injurious occurrence of these can scarcely be guarded against; but it is, in the philosophy of physic, an interesting fact to observe, how instantaneously sudden grief, fear, disappointment,

or other strongly depressing passions, will bring on that relapse which will generally run the same course as all the preceding.

It is a common opinion in physic, that a fever of this nature cannot exist without organic disease; and I presume I need scarcely say that such habitual fever has been often considered and called a hectic, the produce of such disease. Of hectic, the real produce of organic disease, no one can doubt, nor of the singularly periodical diurnal character by which it resembles remittent fever. But it is highly necessary not to confound things so essentially differing; while the distinction assuredly often demands great attention on the part of the physician. And from numerous cases, of such a nature as to leave no doubt whatever, I am convinced that such chronic fever, bearing all the characters of this imagined hectic, do exist without any organic disease, and even for long periods; since, while not the least symptom of such affections could be traced during their continuance, the absolute and entire recovery of the patients, and a recovery lasting for the remainder of life, has followed. Nor needs this be doubted, when we see that intermittents, equally chronic and durable, and where also organic disease had been suspected, terminate in perfect health, lasting

equally through the patient's life. It is too common for physicians, in these cases, to suspect organic disease, because it sometimes exists, and, as I before remarked, because they have formed an hypothesis that nothing but such a permanent exciting cause could perpetuate or thus prolong the febrile diseases of Malaria. As to the question of hectic, I shall not now pursue it, because I must again notice it when on the subject of intermittent; when I shall also point out some circumstances which facilitate the investigation and distinction.

Respecting the organic affections, I have already shown reasons for avoiding that discussion here. I can but allude to a class of disorders to which I dare not give the space which they would require. But I must distinguish at least, lest I should be supposed to give less value to these affections as connected with chronic fever of this nature, than they amply demand. I have said that the mild disorders of this kind may exist without organic derangement, or without conspicuous affections of this character, not that they always do so. In our own country, however, I believe, this is common; and particularly where the original fever, or the habit of such disease, has been acquired accidentally, or by transient

exposures to the cause; where it is not maintained as it was produced, by a permanent residence in a pernicious district. In the reverse case, there is more cause for suspicion; and it will frequently also, it is probable, be found that there is organic disease present: though when this is not considerable, the difficulty of ascertaining it is often great, particularly in the case of the spleen. In such cases as I allude to, it is plain that the circumstances resemble those which characterize the pernicious climates of France and Italy, however inferior in power; while in those, independently of what is asserted or believed by foreign physicians, we might infer that the organic diseases were a frequent or general accompaniment of the fevers in question, whether considered as rigidly necessary to their existence or not.

With respect to this chronic remittent, I ought to add one more, practical remark. It is, that other circumstances being equal, it will, in practice, or, as a disorder calling for medical aid, occur more commonly among females than males, (or thus at least it has occurred to me,) and also be more apparent to physicians in the higher than the lower ranks. The causes of this are of a moral, not of a physical nature, or at least pre-

dominantly so; though the greater delicacy or irritability of females may render them greater sufferers, in reality, under slight modes of this disorder. The moral causes are, abandonment of mind, self-indulgence, luxury: conditions on which I need not dwell, and which I need not apply more particularly, but which, it is evident, aggravate all slight diseases, not merely to the eyes of the physician but to the feelings of the patient. And reversely, while courage, exertion, or resolution not to submit to aught but absolute necessity, diminish the effects of all such diseases on the patients, it is further true, that a powerful exertion will often terminate the accession altogether; just as similar efforts of mind often cure intermittents, and have removed even gout, ordinary fever, and other diseases.

I must however also remark, that there is a not uncommon physical reason for the greater suffering of females in this disease; and it arises from the menstrual derangements which I formerly noticed; which, however they may be an effect, and not a cause, appear in themselves to produce injurious consequences as to the health. Whether from this cause, or from the general state of disorder in the system, it is a circumstance also demanding notice, that in severe and

continued cases, barrenness is not an unusual occurrence; commensurate with its appearance, and, when shown to be removed, by indications of pregnancy, giving often the first decided evidence of the termination of the whole disease. That anaphrodisia occurs in an analogous manner in the other sex is no less true.

I might perhaps safely still add to these, another cause, and of a physical nature as to its action; however dependent on mental circumstances, but on manners rather than morals. This is the comparative uniformity of occupation and of residence to which females are subjected: an uniformity which, with respect to the latter, when such disease is present, may, and does, become a continued life of seclusion or confinement, with the addition of indolence, self-indulgence, or utter listlessness both of mind and body; and of a mind also which, but too often neglected, possesses neither power to act nor ideas to act on or with. In those cases, there is nothing to break the habit of disease once acquired, as there is no mental or bodily action to oppose it; and I have, here, more than once, shown how the chronic diseases of this nature are dependent on habit. As the reverse of this, it is superfluous to point out the various circumstances in the oppo-

site sex which tend to remove or counteract these influences; since they are obvious. Nor need I now suggest to physicians, that which they must so often have seen confirmatory of this; while numerous cases resembling those which Haygarth has pointed out, and which seem to me to illustrate these very facts, probably, among others, must be familiar to every practitioner versant with the opulent and unemployed classes of society.

I must now state the progress of a single accession or relapse; as there are variations in that, which demand notice. As a point of comparison, the original attack of a remittent of the more severe form, is frequently, perhaps generally, by a cold fit, and often as decided and severe a one as that of intermittent. But in the progress of the disease in the mild form, as generally also in the severe one, the cold fit disappears, or becomes at least difficult to trace. Still, there are often indications, consisting in partial cold feelings or the affection of particular spots in the body, in the asperity, acceleration, and contraction of the pulse, in yawning or stretching, often attended with an indescribable feeling of uneasiness which seems to penetrate every muscular fibre of the body, in a sensation resembling that

which the excessive use of tobacco produces in those not habituated to it, or in a shrinking and paleness of the skin, or even in a mere alteration of the physiognomy, sometimes felt in the muscles of the face by the patient himself, at others, visible only to the watchful and discerning spectator.

Thus also in the chronic or prolonged remittent, it sometimes happens that the first paroxysm of the new accession or relapse is attended by a marked cold fit, while, in every succeeding one, nothing can be found but one or other of the symptoms just mentioned, and sometimes not even those. Again, it happens, that the cold fit, however short and slight, is sensible at the commencement of each daily paroxysm, or at least for some time: and thus the disease acquires the character of a chronic quotidian, as this is the boundary by which these two congenerous diseases can alone be easily separated. In other instances, the commencement of the relapse is marked only in the stomach, by a total and almost sudden loss of appetite, sometimes attended by slight nausea. And again, it is not uncommon for the disease to proceed as it commenced, in a manner so uniform, that scarcely any indication of a cold stage can be traced through its

progress, while it is seldom that the physician has an opportunity of witnessing its commencement.

Such is all that it appears necessary to say in addition, respecting this fever as a chronic or habitual disease; while, as such, it may possess any or all of the symptoms described as belonging to the simple disease, and which I need not repeat; and while, particularly, it is not uncommon to find it associated with the local and painful disorders that will be described hereafter. But before quitting it, I must also add, that although in the description of the mild remittent, I have spoken of it as if it were a disorder limited to one period of fever or to a single disease, for the sake of simplicity, it is rare that this is the fact; and the description then given of it must in reality be considered as most generally that of a chronic disease; of the fever just discussed, which becomes habitual, or has a tendency to relapse through a period of months or years.

But before terminating this portion of the subject, it will be useful to recapitulate in a brief summary, the characters of this fever, and to add one, equally brief, of the proofs of its cause and nature; that the reader may see in a condensed form, what I have been obliged, for the sake of

proofs and illustrations, to treat of in some detail. And this is the more necessary, from the evident neglect which this disorder has experienced, and from the great errors daily committed respecting it: errors, such and so general, that it is somewhat difficult to find a practitioner who seems truly aware of its existence, and, on the contrary, much more common to experience the incredulity, both of physicians and patients, when attempts are made to demonstrate its presence, or, by this, to explain the obscure derangements of health in question. So difficult is it to introduce new views among those who are guided solely by habit, and not by observation; and so singularly contradictory is the conduct of physic, which, while it complains of the general imperfections which it acknowledges, always meets attempts at improvements in the details, with an opposition which implies that it possesses no imperfections, but that we have arrived at a complete knowledge of this truly obscure science.

When the disease in question is mistaken for consumption, for dyspepsia, for hypochondriasis, for atrophy, for "nervous disorder," and, if with local affections, for many more diseases, even for palsy, it is fully time that its real nature should be explained and understood; as the sufferings

which it produces are scarcely exceeded by those of any disorder in the catalogue, and as these are not merely endured as incurable, but since additional diseases, and even death, are the frequent result of erroneous practice under false views of its nature.

If this obvious disease has been so much overlooked or mistaken, I doubt not that it will shortly appear to be very common, now that it is distinctly pointed out. And perhaps, the explanation which I will now suggest may also form that apology which every just critic is bound to find when he can. England is so generally free from the intermittent fevers which form the readiest road towards its analysis, or towards even the ready knowledge of common remittent, that out of thousands of medical men, and especially in the metropolis, there are hundreds to whom they are unknown; as may also be truly said with respect to their causes, or to the existence of Malaria and of places generating it: a subject however less pardonably overlooked, and perhaps chiefly so from the perpetually mistaking remittent for typhus. And further, as it is from books chiefly that the great majority of ordinary practitioners draw their knowledge, they do not see a disease of this nature unless it be

marked as books mark it, severely and distinctly : while, I may add, that from limiting themselves chiefly to English and to modern, and also to systematic writers, they exclude themselves from a knowledge which could scarcely be acquired but in a very different course of reading, if indeed it could even thus be attained.

Hence an ignorance which is somewhat excusable, naturally enhanced by what is less to be excused, the viewing diseases as definite events under definite terms, instead of generalizing them by means of analysis and analogy. If remittent fever in its ordinary form is somewhat better known, and if a due study of this disease might have led to the conclusions here drawn, yet has this also been too generally misapprehended, both as to its nature and its cause, as I have often shown ; remaining a subject of vulgar error as to its theory, and of empiricism in practice. Such is the apology ; nor can it be otherwise, while, in the very great majority of those who pursue physic, it is a mere art, or, in reality, a trade, not a philosophical study as a branch of natural history : and he would be an unreasonable critic indeed who should expect from a manufacturer of mathematical instruments or of chemical drugs, that which he ought to seek in the Aragos and

the Barlows, in the Gay Lussacs and the Daltons. Physicians themselves, at least, know that this is a just view of the state of this art and science; as it were unreasonable to expect that it could be otherwise: if the public commits the very natural error of supposing that the art and the science are the same thing, they must not imagine that censure is passed when there is merely drawn an acknowledged distinction.

The summary, now, which, having explained the causes of the neglect of this disease, I would give, is the following.

It is a remittent fever, bearing all the characters of that disease as it is universally known; but in a modified degree, and often so slight, as to require some attention in tracing its form and even its existence.

It is apt to become habitual, or to recur at frequent but variable intervals, during an indefinite course of years, so as even in some instances to occupy almost a long life. In such a course, it also varies its characters and symptoms, and in some cases, becomes a marked chronic intermittent; while in others, the imperfection or brevity of the intervals may cause it to appear as a continued febrile state.

Its accessions, when they are to be defined, are

as various in duration as those of the ordinary severe remittent.

It is the sequel, in some cases, of quotidian intermittent or of double tertian: and if a mild fever of this nature follows a common tertian, the length of the interval will oblige us to rank it under tertian, as a chronic disease. It is also the sequel of common and acknowledged remittent; and thus it may also be a sequel of what is called typhus fever, because the remittent is often thus misnamed. It is equally a sequel of what is called low fever or nervous fever, which, equally mistaken for a mild typhus, is a remittent. And, these also are the proofs of the real nature and origin of this disease; since it is their continuation, or forms varieties under them. And while its causes must be sought in Malaria, (though others are not absolutely excluded, in our present state of knowledge) even when it occurs as a primary disease, this also establishes, even further if that were necessary, its true nature.

Such is the simple disease: a chronic or relapsing fever without accessory symptoms; or rather, without incidental, or attached, or superfluous symptoms. I need not here dwell on the ordinary attached or necessary symptoms of all fevers: but it will be especially useful to recapit-

tulate, or further point out, all those which, belonging to this disease, may also arise from other causes, or may be original or separate diseases; because to mistake those in this manner, is the greatest source of the errors which occur in practice in respect to this disorder, whether as regards the diagnosis, (as it is termed,) or the treatment. And when they are of a marked nature, while the mere fever is slight, or when the practitioner is of that class which never penetrates beyond a symptom, or when, as the slave of names, a symptom is to him a disease, or when, lastly, with even better discernment, such symptoms are erected into diseases because there are other disorders in which they are the obvious or essential part, for which the varieties of this fever are thus mistaken, it is most certain that the errors which I trust this enumeration may at some distant day correct, must have been, and still are, frequent and serious; in proof of which I might, with great ease, produce cases that would materially enlarge the bulk of this volume.

These varieties, or the chronic remittent with superfluous or attached and unessential symptoms, or with some of its symptoms peculiarly distinct, or aggravated, and the more deceptive when the mere febrile condition is slight, compose what

the title of this chapter means by anomalous remittents. Hereafter, where the intermittents of an analogous character are reviewed, I have adopted also the term simulating; not that it would not have been equally justifiable to introduce such a division here, but because I have not seen examples of this mode of marsh fever where the simulations have been so numerous and perfect as I have found them under the more distinct types, or in those cases where the febrile state and the peculiar symptom, or disease, with it, were derived from some form of intermittent. Hence I have reserved the whole of the simulating marsh fevers for one chapter to follow that on intermittents; though I am bound here to observe that some of them have occurred also in the chronic disease now under review. If I had been permitted to treat of remittent and intermittent fevers both, under one general head, I should have avoided, not only the present inconvenience but much repetition; but I must submit to received usages, as the reader must to the additional toil. Whether the few varieties which will now complete this chapter should be called anomalous or simulating, deferred till I treat of intermittent or described now, is one of those undeterminable questions of arrangement, of

which there are here but too many more; so undefined are often these irregular disorders.

It is with little reflection assuredly that debility is considered as a disease; yet is this condition, one of the marked symptoms of the disorder in question, often to be found, in military returns in particular, as if it could be an independent disorder. From how many other sources it may arise, it is not for me here to inquire: it is enough that it is one of the very general effects of that febrile state, in this disease, which, from its slenderness, or from the brevity of the attacks, or from negligence, is so frequently overlooked. And that thus mistaken, and of course neglected, when arising from this fever, it is a very common source of trouble and misery to patients, just as, in soldiers, it leads to suspicion of fraud, as was formerly suggested, I have abundantly ascertained.

Lest however I should be thought to have overrated this class of error, (though military physicians of real learning will, I believe, scarcely disagree with me,) I may quote the celebrated *Morbus Pannonicus* of Hungary, or the *Morbus Hungaricus* of Jourdan and of Manget, as also an analogous disease formerly much noticed in Virginia, described by the name of the *Asthenia*

Virginica. No doubt can remain on the minds of those who will read these histories under the views which I have here afforded, that the former disorder, under which so many soldiers died, was the chronic fever in question, rendered mortal, it is probable, by bad food and bad treatment: while, with no small blindness on the part of the narrators, every cause but the true one is assigned; such as drinking bad water, the heat of the climate, bad food, and much more; many of them, doubtless, connected with the mortality; yet but as incidents, or as belonging to the cause of the disease, inasmuch as producing the previous fever in question, which was overlooked.

Thus when thirst is the most vexatious symptom of this fever, it is, if not marked as an independent disorder, supposed to arise from some mistaken cause, while it is a mere symptom of the febrile paroxysm.

Indigestion, loss of appetite, irregularity of bowels, these and other ordinary symptoms of a deranged stomach, are thus attributed to dyspepsia, as I have already remarked; an undefined disorder, arising from many causes, and scarcely to be considered in any case as original and simple: while the error is confirmed when occasional thirst, headach, debility, and other well

known symptoms of this disorder are present, and when these accessory ones are the symptoms of the fever. Thus also the affections of the mind which are notoriously the produce of chronic remittent, are conceived to be the hypochondriasis of dyspepsia; while that which is called the hectic of dyspepsia will often be found to be nothing more than the fever of this disease; rather, the very disease itself, and the cause of all the rest.

And if such dyspepsia, as a chronic and endemic disorder among the people, in all the insalubrious or marshy situations in France and Italy, has often been pointed out by the physicians of those countries, it is not less true that it exists even in our own island, as a similar endemic, and from the same cause; confirming the view here given of its occurrence in single cases, and in a manner so apparently independent of such fever, as to be mistaken for an original disorder, or at least for a disorder dependent on some other and separate cause. It is from information however, not from present observation, yet from information which appears worthy of reliance, if I here state, that in certain parts of Hampshire, and in some other of the districts subjected to Malaria, the general, and almost the only complaint made

by the mass of the common people suffering under the chronic disorder in question, whether as the sequel of acute fever or otherwise, is dyspepsia, or, as it is expressed by themselves, "the stomach." And while this leads to erroneous judgment and erroneous practice in the hands of those who are unaware of the real facts, so does that leading symptom, viewed under the fashionable prejudices of English practitioners in the present day, produce that injurious and often destructive practice to which I already took occasion to allude.

What are called nervous symptoms, a list that would weary human patience to specify, but which cannot require enumeration, are, further, most common symptoms of this chronic fever, while the fever itself is invisible or unnoticed: and there are perhaps few errors with regard to it more common, than that of designating it under this cloak for ignorance, and treating it accordingly: though, fortunately in one respect, the remedies of change of place and air, so commonly resorted to for "nervous diseases," are the cure of this one; if that good fortune is not in some measure counterbalanced by the ignorance as to the true cause which is thus perpetuated. And, of that ignorance, the leading evil is, that

this cause is not avoided by the different migrants or travellers : who thus, often, not merely lose all the advantages which they would have gained from change, but much too frequently plunge headlong into the very dangers which they ought most carefully to shun, and most frequently in the case of travelling to the warmer climates of Europe. This is a subject which I have noticed in the essay on Malaria, but which I ought not to avoid repeating, important as it is; since it is most certain that the evil consequences to which I here allude are very frequent, and have been especially common since travelling has become more easy and more general. I need not dwell on hysteria, thus mistaken, after what I formerly said respecting it; the more as I shall have occasion to notice it hereafter as a symptom of intermittent, and as often producing there, a truly simulating and deceptive disease. All that I need remark is, that if the hysterical paroxysm should be conspicuous, and the febrile symptoms obscure or gentle, or if the uninformed practitioner should overlook the one, to notice the other and more striking, this fever will be mistaken for mere hysteria, as I have often witnessed. And if in such instances the paroxysm may be as regularly diurnal as the febrile attack to which it be-

longs, so may it be irregular, by missing to return; in which case it will become still more difficult to convince the attendants of its real nature, as the insufficient practitioner will also more easily mistake it for an original and independent disorder.

If I might, here, have entirely reserved the case of headach, considering it as a local disease, and thus placing it in the same division with all those more purely topical disorders, chiefly of the nerves, to which I can here but allude as connected with remittent, and if, in fact, I have been obliged so to treat of it among the intermittent topical diseases, I cannot still avoid speaking of it here, as being one of the most common of the anomalous appearances of this fever; while, like the stomach, such is the nature of this part, that its disorders may almost equally be considered general as topical; and the more so as the headach is a leading symptom of all fever.

It will be found on a strict investigation, that many of the durable or chronic headaches are merely those which belong to this fever; and while, as lately remarked, it would appear that the female sex is more subject to headach than the male, from whatever causes arising, so I have

observed that, in the habitual remittent, it is more common as a symptom in women than men. And in more than one patient, I have found that where this disease was habitual, some of the accessions, or distinct periods of fever, consisted in a series of headaches alone, while others bore their ordinary character; or at least this symptom was so predominant, that the accompanying febrile disease would have escaped the notice of an ordinary practitioner, as it did of the patient; perhaps even of a more acute one, had he not been able to trace the previous progress, and not been acquainted with the whole history of the patient. To know that such may be one mode of the chronic remittent, is important, considering the frequency and the obstinacy of this disorder, the headach, and the numerous causes from which it appears to arise: while the proofs of its identity or connexion, consisting in what I have now stated, will be found by any one who will study the disorder which I have here described.

For what else I might have introduced into this chapter, I must refer to that on the simulating intermittents: and if there is a considerable division of symptoms or diseases which might also have found a place here as connected

with this chronic fever, the division which I have been compelled to adopt for the sake of the proofs, obliges me to defer them to a future part of this essay.

If I have hitherto quoted no authorities in support of these views respecting the chronic remittent, it is not solely for the reasons hereafter given in explanation of the plan adopted in this essay, and which were also hinted in the preface. I have not succeeded in finding among the authors whom I have consulted since this essay was drawn up, (though that is not a small number,) any detailed histories, nor even any general views, whence I could have derived such support: excepting, that as to particular facts, I have found many valuable ones noticed under the head of intermittent types, which I have consequently accumulated for illustration in a subsequent chapter.

But if I have not found in such books, descriptions whence I might have drawn, or by which I might have supported my own, no details, no account of such a chronic fever, I cannot for a moment doubt that it must be perfectly known to the French and the Italian physicians; though so completely overlooked by our own writers and practitioners as far as those are known to me.

This disorder, in all its varieties, must not only exist, as I have already said, but it must even be the habitual state of disease or suffering, otherwise than as intermittent types may share, in all those European countries where Malaria is severe and its diseases the endemics of the soil. This must, in fact, be the perpetual state of fever, under which it is said, by all foreign, particularly French, writers on this subject, the unfortunate inhabitants exist, such as that existence is: and if they have not entered into details, it is possibly because it appeared to them too common and familiar, too well known to require such a history: forgetting perhaps, as is not unusual, that any one could be ignorant of what, to them, did not appear to demand teaching.

CHAPTER III.

*On the proximate Cause of Remittent or Marsh
Fever.*

I BELIEVE that it will be a phenomenon in medical writings, to find an essay on such a disease as fever, unattended by a theory of its proximate cause. Yet were it as well, if the professor who spends months in exciting the wonder or applause of a juvenile audience, with phraseology which he does not himself understand, would substitute for all this waste of words and time, the confession of his own and the general ignorance, if his successor would strive after something more useful than inventing a new system, of which the only merit lies in the difficulty of finding new forms of phraseology equally unintelligible; and it would also be no small advantage, if the time of students, seldom too abundant for all that is really to be learned in physic and its collateral studies, were occupied in something more profitable than disputations about words, reading as idle, and attendance on wordy lectures, more idle than all, inasmuch as they are the cause of all

this perversion of time. Then also would medical writings shrink in size and diminish in number: consummations all of them, to be wished, but not to be expected while words shall usurp the place of ideas; as long as the substitution of one term for another shall be considered philosophy, and the word logic be an empty and an unmeaning sound.

Where ignorance exists, the consciousness, with the confession of ignorance is, if not the first step to knowledge, the preliminary and the necessary one; for never yet has philosophy thriven by dressing up fiction and vain speculation in the garb of truth and sense. Physic knows not how the poison of fever acts, nor on what it acts; what are the preliminary effects which produce the symptoms that are obvious to our senses. It cannot even conjecture why these actions should cease, why they should be renewed, and with a regularity, often not to be exceeded by that of a machine, or why they should cease to be renewed.

Doubtless, the inquiry is a most interesting one; but how can we inquire when we have not the slightest element ascertained, on which an inquiry can be founded? We know not where to begin: it is to solve a problem in dynamics with-

out weight, time, or velocity ; to analyse an unknown substance without the means of analysis, when we do not even know that it is a compound one. That what is now impossible is always to be so, is not however what I mean to insinuate ; far from it : but as the career of philosophy has proceeded through facts, and never did advance one step while it toiled through words, so must physic submit to follow the same and the only road. When we understand the physiology of the animal body, we shall have laid the foundation of a knowledge of its pathology, and, with that, it will be time enough to attempt an inquiry into the proximate cause of fever. If there is any one who, leaving his schools, or who, confined to medical writings, and knowing only medical laxity of reasoning, fancies that he understands physiology, even, I may say, any one point in physiology, let him pass a few years in the study of the accurate sciences, in the mathematical ones, and in chemistry, and in the habits of a rigid logic, and let him then return to his medical writings and question himself. He will not require the answer that could easily be given to him.

Yet, though averse to enter on this endless subject, and very especially on any of those spe-

culations which are either innocent in themselves or have now lost their influence on practice, I cannot well avoid noticing some recent doctrines of this nature, which are as little proved, though perhaps more plausible; while productive of, or threatening, dangerous consequences.

I shall leave that theory which represents fever as consisting in inflammation of the brain, to the answers which it has already received. The action of Malaria, say the French, is "sthenique," and the various symptoms of debility are the effect of exhaustion from the previous stimulus. The natural question is, what or where is an excitement or a sthenic effect which does not occur at all in innumerable cases. If indeed the action of prussic acid, or lightning, or a cannon shot, is sthenic, then the assertion will not be disputed: and thus he who, under the action of Malaria, falls down instantaneously with apoplexy, has died of over-excitement.

The fever of marshes, say others, under whatever form, is a gastro-enterite; or, essentially and radically, it is but an inflammation of the inner membrane of the stomach and bowels, one or all; and every other effect and symptom is sympathetic or consequential: or "adynamique," arising from "sur excitation." On this is the

practice founded, by those who thus believe in the last new theory; while, it is said, the success of the practice, consisting in bloodletting and so forth, proves the truth of that theory. Let us inquire as to both: to say nothing of the evil results which flow from acting upon this fashionable hypothesis.

But first of all, how can such an inflammation, and of such a membrane as this, generally, is, produce so deadly, so universal a disease; a disease so abounding in symptoms, present and subsequent, so endlessly varied, and so fatal? The stomach, and the bowels also, are ^{so} often much more and more extensively inflamed, and without such fever, or such symptoms, or such effects. In these fevers there is often no pain, not even on pressure; and where then is the inflammation? Thousands of persons die with all the symptoms of this fever, even within a few days, within a day, within an hour; the gastro-enterite, here, ought to be excessive, yet there is none, for there is no pain. There is none, for a much better reason; that it is not found on dissection. We may refer to a thousand authors, for thousands of dissections, where, if the bowels and stomach have sometimes been found inflamed, there has not been the slightest trace of present or previous

inflammation in numbers without counting. And if this were not enough, we find patients who die of fevers with very slender symptoms, where there has been no pain; and yet dissection proves the bowels to have even been seriously ulcerated. If inflammation had killed the patient in any case, how is it to disappear and leave no trace? and what species of essential cause or symptom is that which is not always present?

Whatever dissections have taught, they have not taught us the cause of marsh fever; and let he who doubts, read all the monstrous volumes on this subject. They have taught us that certain effects take place occasionally: that is their use: and the gastro-enterites, the inflammations, be they what they may, are, in reality, symptoms or effects: how far they must regulate the practice, is a question not for this place: but let them regulate it in as far as they are such, not as being the essence and the proximate cause, and then they may effect good and not harm.

It is scarcely worth while to ask, after this, what kind of inflammation that must be which can return periodically, and with such severity as to destroy a patient, and yet have no existence within another hour. If I have elsewhere shown that an inflammation connected with intermit-

tent really possesses this singular character, it is a fact which will not invalidate the much stronger arguments already brought forward. This sole objection, which has been urged against the French theory, is not therefore, in itself, valid: because when it is asked how can an inflammation cease, return, or last for life without causing much mischief, it is forgotten, or rather it was never observed, that the ophthalmia of this character was the inflammation of intermittent fever; while the caprices of gout, erysipelas, and rheumatism, show that this is no uncommon occurrence. It is, in reality, an inflammation of a peculiar character; *sui generis*, distinct from common inflammation: and hence also the supporters of this theory may retort, (though from want of making this most necessary distinction, here I believe first decidedly pointed out, they have not done so,) that the fact of its being cured by bark and stimulants is not an objection, because this is precisely what happens in the intermittent or neuralgic ophthalmia.

But I need not proceed; as I hold that the answer is complete. As to the schismatic theory of Monfalcon, who considers the whole matter to consist in a predominance of the white capillaries above the red, in an unusual “développe-

ment du système lymphatique," and a "subordonnement des capillaires sanguins aux blancs," I presume we may rank it with Dr. Cullen's proximate cause of rheumatism, which consists in an "inflammatory affection of the sanguiferous system, with a peculiar affection of the muscular fibres." I shall pass on to the cure of remittent fever.

CHAPTER IV.

On the Cure of Remittent Fever.

I MUST commence here, as before, by renouncing all intention of treating of this part of the subject as it relates to the severe remittents of the hot and tropical climates. I need not compile when I can refer; nor could I speak with confidence of the cure of diseases that I have not witnessed and treated. Nor indeed would it be an easy task to elicit the truth amid the disputes and contradictions which are found to pervade those endless works. The most opposite opinions have been entertained, and the most opposite practices followed. As happens in tetanus, all these modes have failed, all these modes have seemed to succeed. The conclusion of him who knows nothing of physic, will probably be that the imagined remedies have had no concern in the cures, though he will scarcely conclude that they have had none in the ill success; while a fatalist in medicine, as fatalists there are, will perhaps determine that the efforts of the physician are nugatory as to either event

In our own country, there have been similar discordances of opinion, with corresponding revolutions of practice, from the time of Sydenham downwards. In the days of my own education, at Edinburgh, the great, and indeed, almost the exclusive remedy for all fevers, was wine. I returned a few years afterwards, to find wine out of fashion, and to see the same diseases treated by bloodletting. Assuredly, the action of these two remedies is not the same ; but patients died under both and recovered under both. And here it is that the public forms unfavourable judgments of physic and physicians. Yet if physicians can explain to them, that even such apparently opposed means may both be right, the true physician knows full well how often both are wrong in the hands which have not learned to make distinctions, any more than have the public which passes this very natural judgment on what it does not understand. The fault is, that parties and fashions divide on apparently opposed questions, because it is easier to follow than to reason, and because the spirit of opposition is, itself, the sufficient reason to far too large a portion of mankind, in every thing. To ignorance, fashion and party are all in all. These remarks were unavoidable ; since, on no one point in this subject is it possi-

ble to speak, without some investigation of opposing opinions ; unless indeed by adopting a system and deciding by it, as those decide who, having once settled what they consider a belief, find no difficulties in any thing.

I must here commence by separating, in some measure, the treatment of the acute from the chronic remittent, or the simple from the relapsing or habitual disease, since there are some important differences in the practice ; while also I can but consider the acute one as it most generally appears in our own climate.

Can emetics cut short the disease, when given at the commencement of the attack, and if an emetic be given, is antimony preferable to ipecacuanha? Here is the first example of differences in opinion ; or rather, there are two points in dispute. The value of emetics given at the beginning of the fever has been too often decided on theoretical views, and consequently, as is usual in all such cases, exaggerated. Whoever shall judge of their power by his own experience, will probably not place much confidence on what, nevertheless, he will as probably resort to, if at least called on before it is too late. That they do occasionally terminate, or at least shorten the fever, must be admitted ; while they seem to be

chiefly useful whenever the disorder is attended by an increased action of the liver, or in that variety which, with us, goes by the name of bilious fever.

They who consider, that, in this case, antimony exerts an useful action on the skin, with some who are willing to believe in some mysterious febrifuge power appertaining to this remedy, are of course strenuous defenders of the superiority of the emetic tartar; while among those who view the evacuation of the stomach as the great end to be obtained, ipecacuanha becomes the medicine. I must not undertake to decide: but it must be remembered that when the stomach is essentially disordered, when apparently it is affected by that very singular inflammation which so often occurs in these fevers, it may be, and often is, the effect of antimonial emetics to augment that condition, and even to induce an irritability, as it is called, which often becomes of serious consequence in the progress of the disease. How often even death has been the result of such emetics, given improperly or pushed too far, is but too well known: and by such considerations probably, will a judicious physician be guided in his choice. That any peculiar advantage arises from so administering antimony for this purpose that it shall

act also as a purgative, I cannot see, when this particular object can be attained by more manageable and less doubtful means.

Presuming now that the disease is established, I need not enlarge on the general treatment, commonly called the antiphlogistic regimen, since it is as familiar as it is admitted to be necessary in all fevers; while a few of the circumstances which are esteemed to belong to this, or to regimen, must be inquired of shortly. I may proceed to inquire into the use and value of the other remedies which have been recommended and adopted.

Respecting purgatives, not only at the commencement but through the progress of the fever, the general agreement is such, in our own country at least, that there can be no hesitation in recommending this class of remedies; at least in an English writer and physician. But it is a question demanding some detail.

Universally, and through the whole disease, that a state of bowels approaching as nearly to the natural one as may be, should be preserved, is a point on which there are not two opinions among ourselves; while the remedies required, various as they are, are too well known to need enumeration. One caution only is necessary on this point: and

it is, not to forget the distinction, too often neglected, between the medicines which evacuate the entire system, or the saline purgatives, and those, the resinous ones as they are called, including also rhubarb, senna, &c., which act chiefly or solely on the natural evacuations of these organs. There are often strong reasons for avoiding the production of debility; and where bloodletting is improper, the watery evacuation produced by the excess of saline purgatives is also injurious. They are, in fact, causes which frequently aggravate the disease, and very often bring on relapses: and I need not say that when the other class of purgatives are so administered as to produce the same effects, the consequences are necessarily equally injurious in the same cases. Let this practice be viewed in its analogy or otherwise to bloodletting, and the physician cannot well be at a loss how to regulate his medicines.

If I have not yet named calomel in this class of remedies, let me premise that if I have hitherto considered our remittent fever as it is when a simple disease, it is common and particularly in hot summers, for it to partake more or less of the character of the severer and complicated disorders of the hot climates, from derangements of the biliary system; forming that bilious fever,

which is too often supposed to be a distinct disease: the additional symptoms, always sufficiently obvious, consisting in, or being founded upon an increased, and possibly, a further morbid, secretion of bile.

It is in these cases that calomel is considered to be an almost necessary purgative, or at least to effect purposes less easily attained by other means; while with respect to its repetition, no rules can be given save that of its apparent necessity, as indicated by the symptoms, and of attention to the effects which it produces. Here also I must remark, that the imaginary objects to be attained by emetics in these cases, are, by many physicians, thought to be better gained through this remedy; and further, that an early and effectual administration often mitigates or abbreviates a disease that might otherwise be severe and durable. That it has any other effects on our own native fever than such as are derived from its power over the biliary system, I cannot discover; while I have no right to judge whether or not it exerts any different or mysterious action over the severer remittent of hot climates.

I must however, while on this subject, make a remark on the use of calomel in the chronic and relapsing variety: but whether it will be con-

firmed by others, cannot be known till the views which I have been attempting to promulgate respecting this disease shall have become more general. And when, as will be perceived in the course of this work, I am one of those physicians who consider that this medicine has been greatly abused, the remark will probably command more confidence, as the result of experience opposing what may be almost viewed as a prejudice against this much misplaced remedy.

This remark is, that in the relapsing disorder, even if the attack should occur at the end of winter, in patients free from all suspicion of deranged liver or biliary affections, and when not the slightest indications of these can be traced, and when, further, the relapse may be the twentieth or fortieth to that patient, the operation of calomel is to produce obvious effects, which, if I need not specify them, physicians know well to be those which never occur except under derangement of this secretion. And at the same time, what is the important point here, it will be found that after every such effect of the medicine, the force of the disease diminishes, and that whenever the natural secretions recur, that particular relapse is about to terminate. Hence therefore I am led to consider, that even where it is

least suspected, and indeed not to be believed present, there is often, in the chronic relapses, a derangement of the biliary functions; and that calomel, being the remedy for these, is apparently a remedy which cuts short or cures that relapse. That the biliary derangement is here the cause of the febrile return, we have no right to say from this evidence; or that calomel, because it is the cure of this, is the cure of the disease. But be the theory what it may, the utility seems unquestionable: and till I find that other practitioners shall fail where I have succeeded, I am bound to point it out as a remedy, and among the primary or initiative ones; recommending also its cautious repetition just as long as it shall be found to produce the evacuation of morbid bile, while, from the moment this ceases, it becomes injurious.

With respect to sudorifics, we have, as on all else, contending opinions; while it needs not be said how their supposed value has been most commonly derived from a favourite theory rather than from observation. That sweating is often an attendant on the natural solution of a fever, is true, as the same act often terminates the paroxysm of the remittent or the intermittent. But after a hundred such solutions of paroxysms, these fevers

do not the less return ; though if artificial sweating can really be produced, it will often shorten the disagreeable or distressing portions of the whole which consist in the cold and the hot stages. But when the critical solution or the termination of a fever is attended by sweating, it merely proves that a revolution has taken place in the deranged functions, of which this is the test and effect, not the cause ; though it appears to be very much from mistaken reasoning as to this fact, that the virtue of this class of remedies has been so much extolled. This much appears certain, that when it is difficult to produce this effect by remedies, it is because the disease is unconquered, and that when they do act, it is because that is about to yield ; while that which is a coincidence is held to be the virtue of the remedy. And it is also familiar, that if we can succeed by the more powerful sudorifics, such as Dover's powder, in forcing this effect in an early stage of the disease, nothing seems gained by it, while it is often effectual when produced by milder means ; a proof that the useful result is an index of a natural action, and not the effect of the remedy. Thus it is for the milder effects of a similar nature ; a moist and soft skin succeeding to a harsh, hot, and dry one ; marking a favourable

change in the disease itself, and not being the produce of remedies, which, in reality, are commonly inadequate to any purpose. If Mindererus' spirit, or the acetate of ammonia, the vulgar remedy of ordinary practitioners, or saline draughts, or aught similar, amuses the patient's anxiety, or serves to pass the time of expectation, they may usefully occupy the mind; and in this view they are at least innocent remedies.

Yet even here, I would add one caution, and that is respecting the state of the stomach, often singularly affected; while it applies to all cases of amusing or *placebo* remedies, be the purpose of these to gratify a patient who cannot imagine the use of a physician who gives no medicine, or to make up that bill, or remuneration, which a most injudicious custom has agreed to give in no other manner. It is easy to observe, daily, in this disorder, that thus to tamper with the stomach, not only increases and protracts the paroxysms, but prolongs the whole disease, and that those cases, on the average, succeed far best, where the least of this injudicious and empirical interference takes place.

The use of opium requires also a few remarks, as it has been alternately lauded and condemned, chiefly from not attending to some very neces-

sary distinctions. Generally, that it must be improper when it is necessary to administer purgatives, would be a natural conclusion ; yet even here it is often useful, by facilitating the action of these from its antispasmodic effects ; as it further is, by removing that irritation, which is apt to follow their salutary action.

As to its value in procuring sleep, though there may sometimes be even a state of drowsiness approaching to coma, and protracted also long through the disease, it is more common to meet with sleeplessness, or disturbed, or irregular rest ; while I have even seen this consequence carried to such a degree, that the patient did not procure above an hour's sleep out of the twenty-four, during the whole period of six weeks which the disease lasted.

In all these cases, as long as the want of sleep is the produce of the febrile action, or attends the paroxysm, the use of opium serves but to increase the evil, as far as I have observed, or is productive of no advantage, at the best. But it does also happen, that during the remission, there remains an excitement, more visible in the faculties of the mind than in the body, preventing sleep ; a condition under which opium is often advantageous, by procuring that rest which would not

have come on till the new paroxysm was again ready to break it up. Thus also, as might be anticipated, it is more applicable towards the end than the commencement of the fever. With respect to its power as a stimulant remedy, whatever that be, its utility and application will be judged and guided by the same rules which regulate the use of wine.

If I place here that which relates to food, (not its usual situation in medical writings) it is because of a connexion which the rules respecting it have with the immediately preceding remarks; and if I formerly noticed this subject, it is still necessary to recur to it here, in somewhat more detail.

It is a common error in all fevers, to administer food frequently and in small quantities, under popular and theoretical notions respecting the powers of the stomach. To pass by what does not relate immediately to the present subject, this is frequently a very injurious practice in the remittent fever, even when its character is mildest. Even though there should not be a repugnance to food, the process of digestion is suspended, or at least deranged; and the consequence is, not simply that the food thus given is useless, and not merely also that it produces sen-

sible inconveniences, but that its effect is to prolong the paroxysm, or to render it more severe, or, in some cases, to destroy the interval altogether, and to render the fever continuous. Both as to medicines and food, the stomach cannot here be trifled with or deranged with impunity: and so true is this, that even in the most mild and chronic remittent, as was formerly remarked, the same bad effects, namely, increase of severity, or the protraction of the paroxysms, is a frequent consequence of the injudicious use of food. There is but one period in which it can ever be given with safety, and that is, the interval, or remission; and, as I formerly noticed, the choice should fall on the commencement of that, while in the severer cases, where the distinction between the paroxysms is most imperfect, it is for the physician to watch the time when the least evil is likely to accrue, keeping in his mind these general principles.

And further, as, in many cases, this is a disease of debility, as it is indeed in all, after the commencement, it is plain that food, as far as the stomach can manage it, is even an important remedy. As to the choice, that must necessarily be guided by trial and by present circumstances, of which the attendant must judge; remember-

ing however that there is no greater, and no more common error, than that which imagines insipid articles of diet, such as fish, chicken, and all the rest of the farrago, whether vegetable or animal, usually recommended to sick persons and convalescents, to be the most digestible, or, as it is termed, the most light. The truth is as much the reverse as it can well be; while in general, the fancies or desires of the patient are the best guides which the physician can follow; though he will distinguish those conditions where stimulating food would be improper, remembering that this also is really that which is the most digestible.

It would be well if we could avoid believing, that not merely on this point, but in much more that relates to the management of the sick, that ascetic principle which, often unsuspected, never acknowledged, intrudes itself so perpetually into all our opinions and conduct, marring, by habit, that happiness which it once opposed from principle, and multiplying the miseries of which there is surely no want, did not also intrude itself into the direction of sickness, rendering more oppressive its inherent evils. But there is much of this control, and many of these follies, which an acute observer will easily trace to that prin-

ciple; the humane principle which has determined that whatever we wish for most and like best, is precisely that which is most injurious, and in which we must be controlled: a rule that gains its full and pernicious sway, when it is aided by that inherent principle of tyranny and love of command which enjoy their full scope over the helpless bed of sickness.

I cannot avoid here naming the external application of cold, of cold water; or, under modifications of the state of the disease, of the tepid bath. How much it has been praised by Jackson, Currie, and others, is well known to all medical readers, as are the cautions which relate to its use. That the chief benefits derived from it, have also occurred in hot climates, I need not say: while I shall refer to the authors whom I have named, for information and opinions which I could not well discuss here, and which are not rigidly necessary; inasmuch as it is a practice little resorted to in the fevers of this character in our own country, and perhaps not very often applicable or necessary.

I must now return to medicines, and to the use of tonics as they are called; reserving to the last the two more disputed questions which relate to the use of wine and to that of bloodletting.

If the use of bark, which may here stand as the representative of all the tonics, as it is that especially adopted, has been condemned by numerous enlightened physicians in the proper remittent fever, there are not wanting as many who place confidence in it; guided sometimes by experience, and at others by habit, or by theories: just as is true of those who oppose its use. It is a complicated question; since, like every other one in this disorder, its utility or disadvantages will partly depend on the individual characters of cases, as of epidemics; not unfrequently on peculiarities in the patient himself, and on a variety of collateral circumstances as tedious to detail as they must be superfluous to medical readers. Without doubt, there are instances where, even though no inflammatory condition is present, it does not cure the disease, but aggravates, not merely the paroxysms but the entire disorder; whether however by any greater action than that of deranging and oppressing the stomach, appears uncertain. Even thus it may be pernicious: but I see no evidence of a very common opinion in physic, that, thus given, it is the cause of the glandular visceral diseases so common in these fevers, or so commonly following them. These occur equally where bark has not been

given; they are often in existence even before the fever, and appear in many cases to be quite independent of it; while, ignorant as we are of their immediate causes or nature, we have no right to assume that they could be the result of a remedy with whose actions also we are equally unacquainted. This is one of the inconsequential and gratuitous conclusions in which physic abounds but too much; but it is one that is examined by evidence elsewhere, and on which I need not therefore now dwell.

The leading objection to the adoption of bark in this fever, is however derived from the presence of what is called inflammatory action, consisting in a high state of pulse and so forth, and very particularly from the presence of topical inflammation: and it is in these latter cases that it is so violently condemned by French physicians. Yet even here, opinions are divided; and it has often actually been found to be the remedy in such cases. It is as painful to a writer to leave his readers in suspense on points so essential, as it would be presumptuous to decide; yet it may be suggested that if, as will hereafter appear, the inflammatory affections of remittent are of a peculiar character, and not proper phlegmasiæ, and if certain visible and demonstrable ones are ac-

tually cured by this remedy and aggravated by evacuants, the question will not improbably be decided in favour of those who recommend it in all cases ; and it may not be difficult then to discover that prejudice or incorrect observation will explain that testimony against it which has been thought to be derived from experience.

The utility of bark or of tonics in general is however scarcely disputed in those cases where the symptoms are those of debility ; and still more where they are what are called malignant ; nor in the advanced stages of a disease of this nature, even should the fever be almost continuous, or with imperfect remissions. Still less is it questioned when the length of the intervals and the perfection of the remissions have brought this disease into the congenerous class of intermittent fevers. As soon as that character is at all formed, this remedy may be used, and even by those who object to its general use, with the caution that it is not urged beyond the remission or intermission, if indeed that be necessary ; and thus it often terminates at once a disorder, that might pass into a troublesome or chronic intermittent. For all else that belongs to its use, I may refer to the treatment of intermittents, hereafter discussed.

It is with some hesitation that I enter on the question of wine, disputed as it has been, and under the revolutions which its use in this disease has undergone. It is perhaps impossible to find a just medium between opposing opinions; but it is at any rate possible to state a few doubts and queries as to this subject, on which others may reflect, and, perhaps, arrive at some conclusion.

Theoretically, wine is held to be injurious because it excites the action of the heart and increases the tendency to inflammation, and because this disease is held to be of an inflammatory character. There are here two points involved; and to prove that wine must be injurious, it is necessary that both should be established. The question of experience forms a separate subject of consideration.

It may appear a very extraordinary doubt to suggest, against the almost uniform and continued opinion of physicians, but is it proved that wine increases inflammation when existing, or produces the tendency to it in healthy subjects or in diseased ones? Will those who believe it ask themselves why they do so, and whether it is not one of the hereditary opinions of physic, established, no one knows why, and followed because

it has been followed? But, granting that there are cases of inflammation, or a species of inflammation which wine would increase, physicians know full well that they are utterly ignorant of the real distinctions among inflammations which, to the sense or the eye, may appear the same; and that while there are some kinds or varieties which are to be cured by stimulants both local and general, as I shall hereafter show very fully, so are there inflammations, and apparently inflammatory states of the entire system with increase of circulation, where wine is a remedy instead of being injurious. Nor does it appear that the habitual use of wine produces a tendency to inflammation in healthy subjects; since it is notorious that among water-drinkers, the diseases of active inflammation are most frequent and require the most energetic treatment.

But this whole question is too long to be indulged in here; and I may therefore ask in the next place, whether it is proved that the general accelerated state of the circulation in the remittent fever is an inflammatory condition, and whether the topical affections are of a nature to be augmented by wine. This question however is particularly involved in the inquiry respecting bloodletting; and I must therefore suspend it

till I have examined into this practice, when it will admit of a more decided answer.

Here also I must avoid the question of the fevers of hot climates, or submit my belief to the experience of those who hold forth bloodletting as the only remedy in this disease, or at least as a most efficacious one. I am however inclined to believe that, if there are fevers of this nature with severe topical affection, in which bloodletting, in the hands of good observers, has been found a cure or a source of repeated and unquestionable relief to these affections, while the disorder has at the same time terminated in health, such affections have been of that inflammatory nature which bloodletting is known to relieve, and that it has here, of course, been a judicious practice. And further, if, without topical affections, bloodletting does truly cure the remittent fever in any situation, then must its utility be necessarily granted: though I must here make a reservation respecting probable differences in the essential character of this disease in different climates, seasons, or instances, from causes assuredly very little known to us at present.

And this I believe to be the fact; and that all the discordances of practice and opinion have arisen from that fault far too universal in physic,

of judging diseases by their names, or concluding that the definition of a nosology or the general rules of a systematic writer, are applicable to every case. And if there are cases in which this practice is injurious or destructive, as is on the other hand most certain, then is it most essential that physicians should cease to be guided by an universal rule, or, as is truly the case, by the predominant opinion of the day.

On this subject, I can but state my own experience and the opinion derived from it, leaving it to others to confirm or contradict that by their own observations; while, should it even be an imperfectly founded one, it will have the good tendency of causing those to inquire into the cases before them, who have hitherto been blindly following the rules laid down for them by others.

That opinion is, that in the far greater number of cases occurring in our own country, the practice of bloodletting is most commonly nugatory or superfluous, or else injurious. But I must enter into some details on this subject.

In the first attack of the fever, and often through many successive diurnal periods, the pulse is hurried, contracted, hard, or full; or the general appearance, to a common careless observer, is that of a state of circulation similar to

what takes place in inflammatory affections. This state however is, when accurately viewed, the commencement or the first portion of the paroxysm, and its analogy is found in the similar state of circulation occurring in the first stage or stages of the intermittent paroxysm. And if it proves durable through any one diurnal period, or durable as it relates to the whole disease, it merely marks that condition of the paroxysm and of its returns, which equally occurs in certain cases of the pure intermittent. In other instances, it will be found that the duration of this state of the circulation is brief; or it subsides without the interference of the practitioner, as the paroxysm itself proceeds towards remission.

This fact and this analogy ought to explain what the real nature of this particular condition in the remittent is; and if it is so generally mistaken for an inflammatory state, perhaps the term inflammatory fever, and the apparently groundless erection of a disease of this character by nosologists, has aided in establishing an opinion which must however be chiefly traced to that servility of routine by which the unthinking mass follows the road which a predominant theory or a prevailing fashion points out to them as the

easy one : since, of this quality, must the mass be everywhere.

Further, it may happen that there is also present some topical symptom, such for example as headach, the most common of all. How often headach is the result of conditions the most opposed to local inflammation or inflammatory action, I surely need not say ; but if, in the case under review, it exists with this particular state of the circulation, it is easy to see how, under the previous theory or prejudice, it will be conceived to depend on a fixed topical affection of the brain. Thus also is a casual catarrh, not an unusual accident in this disease, attributed, under the same prejudice, to inflammatory action in the lungs ; and thus even does it occur frequently, that such a combination is actually mistaken for pleurisy or peripneumony. The same reasoning applies to other topical affections, and I need not therefore dwell on it ; besides which, as I have already suggested in speaking of bark, and shall hereafter explain more distinctly, the predominant, I do not say the whole of the topical inflammatory affections in this disease, are of a peculiar character, and not true phlegmasiæ. And if I wished for a very high authority of a somewhat distant date on this point, as I have, in speaking

of intermittent, alluded to many modern ones, I would refer to Lobb, who decidedly rejects bloodletting in fevers of this nature, however violent and inflammatory the symptoms; and even in the cases where acute pleurisy or rheumatism are present, or in the diseases so often considered as pure pleurisy and pure acute rheumatism. It is not however for me to deny that real inflammations requiring the lancet, may exist or have existed in recorded cases that have not come under my own cognizance.

It is easy therefore to see the causes which, united to a prejudice, or in hands governed by a routine, lead to that which I here consider an erroneous judgment; and I may now inquire what the effects of bloodletting really are; since, although in the majority of cases, it is, as commonly practised, injurious, as there are others in which it is without important effects of any kind, there are a few in which, under restrictions, it appears beneficial.

In a robust patient, at the first attack of the disease, and when the fever is the first of its kind to that patient, bloodletting is often useful, and at least not injurious. Its good effect is that of reducing that activity of the circulating system, or that vigour generally, which renders the first

portion of the paroxysm correspondently energetic; thus moderating the whole result, not only of the first, but also of the subsequent paroxysms, and consequently of the total disease. And to judge respecting the propriety of its repetition, we must be guided by the same rules: a consideration of the constitution and character of the patient, and further, not merely of the appearance of the disease in that patient, but of the prevailing character which the endemic of that particular season may possess: as it is most certain that in different seasons, the remittent does vary most essentially in its character.

And here it is that watchfulness is required; since that remedy which commenced by being beneficial, may become, in its repetitions, not simply superfluous, but injurious, and even fatal. It is by no means uncommon to find, that immediately after a bloodletting which even appeared to be justified by the symptoms, sudden debility follows, or the whole character of the disorder is changed to one the very reverse of what it appeared to be originally; often causing the physician to repent of his judgment or his haste. Yet even here, the routine practitioner often continues to follow that which custom has laid down as the remedy, while even the more cautious one is

sometimes induced to persist in a pernicious practice, misguided by the topical affections ; or else, by casually arriving at that period of the paroxysm, when the circulation tends to re-excitement, is misled into wrong, when more care, or more frequent visits, would have led to a different system or a different judgment. I know not that I need dwell longer on what ought to be sufficient to furnish the grounds for decision in this case ; but I must further add, that it is an occasionally beneficial effect of bloodletting to convert the almost continuous fever into a decided remittent, or to produce, still further, perfect intermissions : an effect sometimes also occurring in the analogous case of intermittent, under the form of a change of type.

It is perhaps a more common fact in our own country, as I have already hinted, for bloodletting to be nugatory in this fever, or to produce no effects either good or bad ; though I must limit this result to the cases in which the remedy is applied but once, or perhaps twice. When rashly repeated, as is but too common under the erroneous views just noticed, it rarely fails to be highly injurious, or even fatal. In using the terms nugatory or superfluous, I must, however, explain them by saying, that the condition, in the

first place, which it is applied to remove, is that state of the circulation which would equally have subsided in the progress of the paroxysm, and have continued to return with gradually diminishing energy through the course of the disease; the remedy appearing to have produced an effect which would equally have occurred without it: while if no injurious results follow, it is because of the existence of a disease naturally mild, or of a constitution correspondently fitted to bear with impunity what, in another case, would have been injurious.

The cases in which this remedy is likely to be injurious, whether in one application or in its repetitions, may now be easily judged of, *a priori*, by attention to the preceding remarks; while, in practice, the consequences of its use, when bad, ought not to be obscure to any practitioner of almost the most common discernment; if at least he is one who is accustomed to reason for himself from his own observation of the individual cases before him. What those evil consequences are, I need not point out in detail; as they are those which conduct to a very protracted case, with long-continued debility, injury to the intellect, or affections, general or topical, almost incurable; or else to a fatal termination, marked

by the previous sinking of the vital powers, and by all those symptoms, so often attributed in these cases to dangerous or fatal typhus, as they also occur in that kind of fever.

That these are very common events in this fever, from such errors and from such misapplied practice, it will require but little of original observation and reasoning to see, every where and in every season; and were I to pronounce respecting an average, from my own experience, it would be, that, in England generally, the evil consequences arising from misapplied bloodletting very far exceeded the good, and further, that it was the most common cause of fatal terminations or ruined health. I shall hereafter have occasion to show more particularly how it acts with respect to the cases combined with local nervous affections; as this must form a separate subject in the present essay.

Were I indeed to indulge in that violence of generalization so usual with physicians, and so much too prevalent among those who undertake to point out or review a system of practice, it would be to assert that it were better that bloodletting should be utterly abolished in this fever, than that it should hold a place so egregiously abused. But while such sweeping judgments are

too often the produce of temper or arrogance, as well as of opposed prejudice, they are as ill suited to physic, in all the branches of this most complicated department of natural history, as they are unworthy of philosophy and opposed to humanity. Let he who writes on physic never forget that his opinions involve human life and happiness both ; and that to gain a victory of opinions will afford small gratification to him who reflects that he has gained that at the expense of even one life.

As I need not protract the remarks on this subject, I may now return to the question of wine, unfortunately also, too often made a question of fashion and temper, rather than of rational and sober inquiry.

If this remedy has been misapplied in the remittent fever, it cannot now be very difficult to see the cases in which it might be concluded injurious ; since they should be those, from theory, in which bloodletting is beneficial. Thus would it be avoided in the commencement, especially, of a disease attended with great affection of the circulation, in patients of robust and vigorous habits, in seasons of peculiar endemics, and in cases where there may be suspicion respecting the exact nature of the topical affections which

may chance to be present. And while in such a disease and in such stages of it, no peculiar benefit could be expected from wine, even should it prove innoxious, it is always safe at least to avoid its use, even though the character which it possesses of augmenting such a state of circulation should be a false one.

Reversely, its use is pointed out in the opposed circumstances; and that it is a remedy of value I can entertain no doubt, though assuredly far from the specific or powerful one which it was thought not many years since. That its singular combination of stimulant and sedative powers renders it one of the most convenient of the remedies generally classed under the vague term of tonics, seems to have been established by experience that can hardly be disputed; and the most determined theorist can scarcely deny to himself, that he has gained decided advantages from its use in the low or later stages of fever, and that it has often appeared to him the means of at least supporting the patient to a favourable termination. As to the minute details of its application, or of the obvious substitutes, it would be quite superfluous to enter on them. He who cannot act in physic without definite rules, is not fit to conduct it; and to lay down such directions, is most generally

to produce more evil than good, by putting tools into hands unable to apply them or to decide on the propriety of their application.

Such is the leading catalogue of the general remedies in remitting fever. I have said nothing of the use of mercury as a remedy acting on the general system ; preferring a reference to authors on a subject which I do not profess to understand and on which I also doubt.

I gladly leave this question to those who may possess more knowledge of it than myself, to offer the last remarks which I have to make, and which relate to the rigidly topical remedies.

These may be reduced to local bloodletting, blisters, and the local application of cold. It does appear that the former sometimes relieves the affections of the head in particular, while even in case of erroneous application, no great inconvenience can be apprehended from it, unless pushed to excess or repeated too often. It cannot be very necessary to give minute directions on this subject ; since the general principles already explained are equally applicable to it : while, in as far as deceptive good effects, leading to ultimate injury may follow, I shall have occasion to explain these in a future part of this work, to which I shall now therefore refer.

Let the practitioner keep in view, that in very many cases of this nature, there are apparent good effects which do immediately follow the use of this remedy, but that these are shortly succeeded by bad ones; and that even local bloodletting, whether through cupping or leeches, may be so abused as to produce the same injuries as general bleeding. Let him also recollect, that this state, which is conceived to be an inflammatory condition of the brain, is often of a very different nature, as I shall show hereafter, that pain in the head, presumed, under a false theory, to be within the scull, and dependent on disorder in the brain or its membranes, is very frequently external, and moreover that it is very often a merely nervous disease, analogous to Neuralgia, not to be removed by local bloodletting, but aggravated by it; and lastly, that even when absolute inflammation is visibly present, as in the ophthalmia of this character, it is an inflammation which is augmented by bloodletting, as I shall prove distinctly hereafter. And before I quit this subject of the cure of remittent fevers of whatever variety, let me say once for all, that the reader must not condemn it as superficially detailed, nor attempt to apply it till he has read through the whole work. Had I attempted to render it com-

plete, it would have been to anticipate much for which he is not yet prepared, from the want of facts and evidences that belong to a later part of these inquiries; while I must also have made many repetitions, in saying here what it will be much more necessary as well as more useful to say in a future place.

With respect to the local application of cold, its effect is sometimes to relieve such pains; and this is a remedy from which no evil that I know of can follow, under any misplacement of its use or extravagance of application. Of blistering, I cannot speak in the same favourable terms; as far at least as my own experience goes: believing that while it rarely produces any marked good effects, it is very seldom without vexatious results to the patient, by producing an irritation, and an absolute increase of all the febrile symptoms, or at least of symptoms which materially aggravate the sufferings arising from those. They who imagine that a blister is merely the local application which it seems to be, must be very incurious observers, to say no less; since be the cause what it may, whether the poison of the cantharides is absorbed into the system or not, there is an effect, and often of considerable duration, produced, which does not result from a ve-

sication of the same extent excited by other means.

Yet I know and feel that while I thus decide, I may possibly be very wrong, differing as I do from many physicians to whom blisters have appeared a most valuable remedy. Yet it is my duty as writing from observation, and not compiling opinions, to state the results of that observation: while I am willing to believe that others may conscientiously have taken the reverse view, and also under greater opportunity for observation, as well as greater capacity than my own. And this may be explained as to both the opinions, opposing each other as they do, by that fact which I have here alluded to so often; namely, that the characters of fevers, whether as single cases or epidemics, are extremely various, and often demand remedies as different; so that, after all, it must, as on so many other points, remain for the judgment of the physician himself, in each case, to decide either for or against this remedy, by observation on his own practice, and by knowledge, or trials, of the particular epidemic or fever which it may be his lot to treat. This however I would still remark as to the remedy in question, as I might of so many more all through physic; that a fancy or prejudice is

not less often the cause of a favourable judgment, than it is the inducement to adoption, when the experience itself is of no value; while I have had abundant proofs of this by witnessing, in an hospital practice of great extent, and through a long course of years, the invariable use of blisters in these cases by one physician, and the as invariable neglect of them by the other, in equal attendance; when the results, as proved by the registers, were absolutely equal for both, during the whole period.

Such are the views relating to the treatment of well-marked remittent; but I must now add some remarks respecting those milder varieties which I have described at so much length; a length for which I should apologize had I considered that subject understood as it ought to be.

A sweeping conclusion as to the ordinary simple fever of this character, would be, that it requires no remedies at all; and most assuredly, it is far better left to its own operations, or to nature, as the phrase is, than that it should be tampered with by intermeddling and routine practitioners. There is little good to be done by remedies; but it is not so as to the harm. Left to itself, its periods proceed in a very orderly manner to a favourable conclusion; but it is rarely

so when a busy or active practice interferes. What the evils to be produced may be, can so easily be concluded from the preceding remarks, that I need not detail them.

When however I say that it is best left to its own progress, this is a remark which merely excludes active practice or decided remedies. Here, as everywhere, we cannot dispense with the removal of all causes of offence and irritation; or with what may be called negative practice, by means of repose, tranquillity, the removal of thirst, and so forth.

And if, in the description of these varieties, I was obliged to notice the evils produced by exertion, I cannot here dispense with some further remarks on that subject: since the paroxysms are thus frequently prolonged or aggravated, when, by more care and attention, they might have produced comparatively little inconvenience: an occurrence also more common, for obvious reasons, in the slighter and chronic cases than in the better marked "nervous fever."

Thus when the whole visible paroxysm is nothing but a muscular debility which, with care and rest, would have been limited to a few hours, an exertion through that time will not only protract it through a considerable interval, but also

produce other symptoms and greater inconveniences: such as, increase of pulse, headach, additional loss of appetite, and an augmented sense of general suffering. The same consequences also follow from mental exertion under the same circumstances; and if I need not repeat what I formerly said respecting sleep, it is plain that the reasoning is the same. In all these cases, that indulgence to the feelings or caprices of the patient which humanity ought to dictate, is also correct medical practice; much too often, however, controlled by the ascetic principle on one side, and by that of what, for want of a better term, I may call tyranny on the other.

Perhaps, under the head of negative rather than positive practice, I may include that attention to the bowels which consists rather in maintaining a natural condition than a system of purging; though, here, there are modified cases, where real purgatives, and among them calomel, will be necessary; while that necessity must generally be left to the judgment of the practitioner, as definite rules for it in all cases, cannot be laid down. This was a subject however which I took occasion to discuss at some length when treating of the severer fever of this nature; so that I may here refer the reader to what was most conve-

niently examined then. And as an attention to the action and state of the stomach and bowels is in reality nearly all that is required, in the majority of cases, while that also is indispensable, so is it requisite that the administration of food should be regulated strictly by the rules which were formerly pointed out. In this moderate fever also, if wine is not absolutely necessary, it is always convenient or useful, as it is almost invariably safe, and not less agreeable to the patient, for whom, as in every fever, attention to the feelings and comfort is essential; an attention which, whether it concerns the mind in one way or in another, is far too often overlooked or neglected in all diseases, either from negligence or want of active humanity, or from that callousness of sympathy which is too common in those who know not by experience what disease and ill health is, or in whom it has been worn out by use or by multiplicity of practice; that feeling of trade it may be called, which forgets the fellow-creature in the routine of business.

There is a state however in this variety, most commonly entirely overlooked, where positive medicines are useful; while by an accidental coincidence rather than design, they are often blindly given in reality, if less effectually than

they might be; the practitioner himself doing the good which he did not intend.

It is by no means unusual, as I remarked before, for it to subside into an intermittent, while the paroxysms are so slight and so indefinite as not to attract the attention of the routine practitioner, who sees in the debility which attends this state, nothing but what is termed convalescence: a convalescence however which is apt to be a very durable disease, and not unfrequently to subside into a long-continued train of local affections, and even into the chronic or relapsing remittent or intermittent.

An observing physician will however easily trace this termination, even though there should be no symptom but a persisting and unaccountable debility; as he will find that it is paroxysmal, and further, that it is accompanied by some symptom or other, in the shape of headach, affections of the appetite, or of the sleep, or even of the state of the pulse, at certain periods, which indicates an intermittent fever, however gentle or obscure. Here it is that bark, or perhaps arsenic, becomes an active and useful remedy; sometimes terminating, even in a day or two, a series of teasing symptoms, or a condition of dubious convalescence, or a better-marked disorder, which

might otherwise prove what I have just remarked, and which, while it is exceedingly common, is very often a subject of much wonder, and also of not a little error, as well to the patient as to the unobserving practitioner.

And in these cases it also is, that a similar and sometimes sudden cure is produced by change of habits, or by change of air as it is called ; while the action of this particular remedy is, as might be anticipated, most conspicuous in those cases where the residence of the patient is in a situation subject to the influence of Malaria, and while also, and chiefly in these cases, this proceeding succeeds when tonic medicines fail ; just as happens in chronic intermittents of whatever origin. And if I have just remarked that this condition is often cured by practitioners, blundering practitioners I may really call them, who are unaware of its nature, that is the consequence of a routine practice which, whether for the purpose of swelling a bill of charges, or from some vague notions of giving strength by tonic remedies, furnishes the patient with a specified number and course of "bark draughts." In fact, it will be found, if I mistake not, a much more common occurrence in physic than it is suspected, that while the notion of producing strength by tonic

remedies, and above all by bark, is one of those vulgar opinions where one *term* is set in hostility to another *term*, not the action of a remedy on the body opposed to the action of a disease on it, the most frequent success of such "strengthening" remedies in removing weakness, is, in reality, the power, whatever it be, which they exert over the obscurer intermittent affections.

I will not however terminate these remarks, without adducing the fact which I have now stated, namely, that of the intermittent and obscure fever which so often follows the apparently simple continuous or slightly remitting fevers, as an argument to prove further, or to confirm what I formerly stated, namely, that the fevers of this class, be their character and duration what they may, are real remitting fevers and the produce of Malaria.

And if I consider this argument or fact as one of considerable weight in the general one which attempts to prove that the ordinary fevers, so commonly, or rather universally, attributed to speculative or imaginary causes, owe their origin to Malaria, I have reserved it to this place, partly for the sake of continuing the impression which I desire to make, and partly because thus placed in union with the other circumstances to

which it belongs, its value might be more apparent. The fact generally stated, but still more particularly explained, as it occurs in practice, is this; that whatever may have been the character of a common fever, a fever which is not a marked, and certain, or a proved and admitted, remittent or marsh fever, or a fever which, in the essay on Malaria, I have supposed or granted to belong to a third class, its very common termination is to disappear by first assuming a perfect intermittent type. If practitioners do not remark, or authors and bookmakers have not distinguished, this very common fact, it is incumbent on themselves to explain the reasons: but if the former have not so done, these reasons will possibly be tolerably apparent in the manner in which "business" is conducted, while, for the far greater part, authors are systematic writers who do not concern themselves so far, or who from some other causes which can be imagined or assigned by those who choose to meditate on such matters, too often omit what requires investigation, research, or original thinking.

And if this particular fact, or the subsidence of a continuous fever to health through the intervention of an intermittent type, occurs very commonly in even the minor fevers, be their du-

ration but a few days, or even one or two, then will it become additionally probable that even these fevers, be their technical names, or their imaginary causes, what they may, are dependent on the same cause as that which produces intermittents, or that they are true marsh or remittent fevers ; since this is one of the essential and remarkable characters of remittent fever in its most unquestioned form. And if this particular mode of termination or evanescence never occurs in the fevers of contagion, or in the true typhus, which, from all my reading and observation is the fact, then is it at least proved, or rendered highly probable, that these minor fevers do not belong to typhus, however physicians may still determine to persist in referring them to the several doubtful or imaginary causes formerly discussed.

Such is an argument which will be satisfactory however, only if it be admitted that intermittent is a disease produced by Malaria alone ; since I must not mislead myself or my reader in a manner too common, by omitting views that would defeat the force of the argument. But on this subject, all that can be said has been stated on different occasions elsewhere, or may be deduced from the general bearing of this essay throughout ; and it is, briefly, that while Malaria has been

proved to be a cause, and the common cause, of intermittent fever at least, no other cause of this disorder as an original one has been proved ; and that while it is unphilosophical to assume superfluous causes, there are abundant proofs of various fallacies, as well as of an usual or prevailing laxity of language, or of what is called reasoning, in physic, which are capable of leading, and have led to that popular belief which I here conceive to be an erroneous one.

And let me make a general remark here, which is, that because physic has been accustomed to proceed in defiance of all the rules of philosophy, persisting in those processes, commonly called reasoning, which it had inherited, as it has continued, from the days in which all philosophy was of the same character, always professing to follow a better system, yet never acting on it, it seems, even to this day, to have indulged its indolence in believing that it was not amenable to the rules of philosophizing, and has chosen, very perseveringly, and not less conveniently, to suppose that its obscurities were insurmountable, and that it might go on for ever, trifling with impunity, an exception to all other science ; authorized to assert instead of proving, to dogma-

tize instead of investigating, and to imagine instead of observing.

If now the fact be as I have thus stated it, and as appears to be the truth in our present state of knowledge, then may remittent fever be not merely a fever of the slenderest nature, but limited to a duration as brief as two or three days; as I formerly suggested: being thus the commonly reputed inflammatory fever of the people, or the synocha of systematic writers and nosologists. In this very fever, it will be often observed that the termination is in an intermittent, slender perhaps and brief as the original disease; terminated, itself, either by the remedies adopted, or, as appears equally common, by the mere fact of leaving the house and confinement for the open air: a change similar to that greater "change of air" which so often cures the better-marked intermittent. Nor, from previous reasoning, is there any cause why this should not be true of remittent; since a perfect intermittent of the most marked character is often similarly cured after two or three paroxysms, or even after one.

If this view of the frequent terminations of fevers in an intermittent of this slight and ne-

glected character, throws doubts on the distinct nature of the synocha of Cullen, so will it confirm those doubts which I formerly stated respecting his synochus as being always a mode of typhus; while, independently of all former reasons for that judgment, an immense proportion of the severer fevers, commonly called typhus and reputed contagious, must be taken out of this list and placed in that genus to which they justly belong. This really is a serious subject, not simply on account of the wrong practice to which it leads, but of the useless and troublesome precautions so often adopted from mistaken notions of contagion, from the alarm thus produced, and from the neglect of patients to which that alarm so often gives rise. Let it not be supposed however that I am one of those who deny the existence of the contagious fever which is produced by the human body, so long and so well known; since if there is aught of evidence in physic, the evidence for this is most uncontrovertible.

All that now remains is, to speak of the treatment of the chronic or relapsing remittent; while the remarks applicable to it may be equally applied to that disease or those diseases of similar character, the relapsing quotidian and the

double tertian ; terms, which if it were of any importance here to be very accurate and minute, would probably apply with more justice to the majority of cases that occur in actual practice.

I know not that I should be very wrong if I were to commence by saying, in an equally sweeping manner as of the simpler modification of remittent last discussed, or of the simple fever without returns, that it is incurable by medicines, or beyond their power. I know of no great average of instances at least, in which the returns or relapses have been prevented by mere medicines, or where those seem to exert any influence for good, over the paroxysms of each relapse, or over the total state of a whole relapse. The inveterate career of this disease appears to be equal to its obstinacy of character in each recurrence.

If however the relapses be severe, the same rules apply as to the single disease, and those I need not repeat ; but that relapse past, no remedy, no medicine at least, appears to prevent the habitual and expected return ; or the returns are the same in point of period and force, where medicines have been used in the interval and where they have not. And it is in this disease that bark, arsenic, and the remainder of the tonic remedies, seem to be peculiarly without power ;

and not less so when the intermissions during the relapse, or the commencements of each paroxysm, are so well marked as to leave no hesitation in referring it to the quotidian and double tertian rather than to the proper remittent.

This at least is the result of my experience, and pretty generally of my reading also: but I shall be very well pleased to be contradicted by any one who may have had more success with medicines; as there is perhaps no disease in the whole catalogue of human miseries attended with greater suffering, and not one with equal inconvenience. To spend years of life in the sufferings of fever, sufferings which a spectator cannot appreciate or even comprehend, indefinite as they are, and unmarked by visible disease or by absolute pain, however well known to those who have felt what fever is, might be even misery enough; comprising as they do, bodily evils as unceasing as they are numerous and distressing. Add to this, nights resembling the days, sleeplessness, often with that delirious activity of mind which aggravates the present as it anticipates further evil, which longs, not to think, but is compelled to be ever thinking: add to it the consciousness of ability for mental exertion, yet the perpetual torment of being for ever checked in the attempt,

the utter insensibility to every pleasurable feeling or impression, the dark present and the darker future, the "*lasciate la speranza*" which is so highly characteristic of this disease, add to it again the persevering coma, where the patient cannot rouse himself yet cannot sleep, and a slight idea, slight indeed, may be formed of this tormenting disorder; less known, fortunately, to our happier climate, than to those pestiferous regions described in the first part of this essay, in which life is, most literally and truly, one long disease, and where death is indeed the only physician.

And let the patient too who has idly calculated on the tolerance at least, if not on the sympathy of imagined friends, not forget what he has endured from their neglect, contempt, incredulity, or tyranny, if he would induce physicians to labour in discovering the means of curing this opprobrium to them and their art. Nor let him forget the continual insecurity, even in the periods of tolerable or comparative health; the insecurity? the certainty on the contrary, that he dares not leave his home, that he dares not adopt that change of place, or follow that system of foreign travel which is recommended as a cure, that he dares not form any plan of life, even from

week to week, assured that whatever he designs to do will be defeated, that if even his life is safe, he holds his health on a tenure which renders life useless. And if this be the picture, (and a slender sketch it is of the truth) let physicians remember that this is not a solitary, not even a rare case. It is the history of tens of thousands, in every country of the world, over all that geography which I have noted, and far more; the prime curse of mankind, availing to their torment, while little availing to the useful ends of disease, the thinning of the human race; since, if it is the picture of this fever, so is it that of every chronic intermittent, be its character what it may.

Yet is this disease occasionally cured; while however there is little in the power of mere medicines. Revolutions in the constitution, of which we can give no account, do terminate it after an uncertain series of years. On similar principles probably, it is removed by the occurrence of other severe diseases, as even the more acute intermittents sometimes are: and there is no one who would not willingly undergo the longest period of the heaviest visitation in the catalogue, in exchange for it; often even with all the hazards that may befall.

Of what is in our power, if it is always just to

the patient to labour through the whole round of tonics, with whatever little hope, there is nothing which seems really efficacious but change of habits; change of air, change of climate, change of every thing. And thus is the disease sometimes extirpated. But the value of this remedy is greatest when that change is from a soil productive of Malaria, or from any other situation generative of the causes of the disease; for by this is it often kept up when it would otherwise disappear. Thus, as I formerly hinted, is it often supposed to be a habitual disease of the constitution, or even a disease dependent on organic affections, when, in truth, it is not a disease of relapses, but a succession of new diseases, produced by repeated applications of the cause.

Nor can I help thinking that this remedy is of much more general application than it has been commonly esteemed; in every case at least where the patient suffering, or having suffered, from fever, would otherwise remain in the place where the disease was produced: the corresponding neglect arising either from mistaken views of the nature of the fever, or from ignorance respecting the sources of Malaria. In chronic cases, or after the termination of the disorder, this expedient is very frequently or generally resorted to

in tropical climates, yet even there, very often without any definite ideas of its nature or action: and hence the practice of sending West Indian patients into the mountains, African ones to sea, and East Indian invalids even to Europe, where the object might often be attained by a much more moderate and less inconvenient migration. But in our own country, it is far too much neglected; or rather, it is scarcely known, or considered as a remedy: so that a protracted disease or a series of relapses is a frequent consequence; or else, in the fenny counties, an inveterate intermittent becomes the vexatious result of this neglect. And the cause of this must be sought in that obstinate and still incurable ignorance which will persist in considering our autumnal fevers as typhus; repeating the same error year after year, and profiting as little by experience as by all that has been written on this really most simple subject.

Hence the unfortunate patient is retained where the poison is ever active around him; ever active and ever acting, prolonging a disorder that might have terminated in three weeks, to six, or leading to relapse after relapse, or lastly, causing the fever to settle into that intermittent form which is so apt to become the inheritance of life.

Thus, to give a familiar and tangible example, in this year, 1826, have the inhabitants of innumerable places in England suffered severely and widely from fevers; proving also that production of Malaria in those districts to which I formerly alluded, as it further proves the power of a hot summer in augmenting that production; while it is even doubtful if one such attempt at removal or change has been suggested, in any one part of all England, even in the fenny counties, or in those places where the cause of the disease is known, and its production from the soil acknowledged; though in most places the name typhus has been as generally conferred on it as is usual in all such cases.

This general assertion I could easily prove by a great mass of specific facts, were it not for the reasons assigned in the essay on Malaria; though I may venture at least to say that I could point out many towns and villages, even in the neighbourhood of London, where almost every house has been affected by fever, and where, in some, every resident individual has undergone the disease; while in those, the causes of Malaria have been most palpable, though the disorder has been called typhus and not one attempt has been made to remove a patient from the place, even when

one after another in the same house was sickening, sometimes dying, and when relapse after relapse was the lot of those who escaped. Thus also could I name villages in Lincolnshire, in Essex, Kent, Sussex, and in many other parts of England, where the people really are aware of the cause, if perhaps carelessly viewing it, and in many of which, not a house escaped in this summer, and in which also the greater portion of all the inhabitants were affected: falling under the disease one after another during the whole autumn, and even dying in a fearful proportion, yet making no attempt to quit places which the practitioner at least should have known to be the cause of all this disease and mortality, as containing distinct sources of Malaria. Not to name these exact places, is perhaps an unnecessary refinement of caution, as it relates to any injury which might be suffered from specifying, for sanitary ends, and with useful views, that which is known to thousands. But having adopted the rule from good motives, I must abide by it: while perhaps it will not only serve the same purpose, but be even more satisfactory to persons to whom these places are known, as ordinary residents, or as practitioners, to make these remarks for themselves, each as to the district

which may be his own; taking for his guide the general statements made in so many parts of this and the preceding essay. Or, to profit by these remarks, let an inhabitant of Woolwich or Greenwich for example, places in reality very little and very rarely affected by these fevers, or let a resident at Marston in Lincolnshire or at Hythe in Kent, as situations more exposed to the causes, investigate the number and characters of the fevers of 1826 about him, then reflect on the nature of the summer, the direction of the winds, and whatever more may be necessary, next examine the lands, and attempt to discover where the Malaria is produced, lastly endeavouring to find out, as to any specific case, when and how the exposure took place, and I cannot doubt that he will come to the same conclusions which I might here have drawn for him; convincing himself that the fevers in question were remittents, and the causes those which I have here described, and, further, acquiring that discrimination as to the causes, which will become to him a source of that practical utility which it is the object of this work to inculcate. And that his own conviction, thus produced, will be more impressive and useful than any belief which he could have adopted from me, I cannot for a mo-

ment doubt; while I do not wish to claim belief as a due, nor desire concurrence to any thing which is not absolute evidence.

There can be no hesitation in making it a general rule, even among ourselves, and in a milder disease than that of the tropical regions, that every patient under a fever in summer or autumn, be its appearance what it may, or though its vulgar name be typhus, should be removed to another situation whenever this is possible, and most particularly whenever the present habitation has produced the disorder or is productive of its causes. There is here at least a chance of shortening the duration of the fever, and also of rendering the existing symptoms milder: and though the success in such cases cannot be proved to be very conspicuous or very certain, since those who doubt can always withhold their consent as to the cause of any event, there can be no question whatever of the great utility, or rather, of the absolute necessity, of such removal, as soon as the patient becomes in the slightest degree convalescent; as thus we have the best, often the only chance, of preventing relapses or final intermittent.

It would be abundantly easy to quote cases in proof of the truth of these views and the success

of this practice, both at home and abroad, in single instances, and on the great arithmetical scale of naval and military service ; but I must content myself with a mere specimen or two from the latter class of records, and chiefly because naval and military surgeons will find no difficulty in confirming them from their own experience.

In the first example, out of sixteen men from a frigate, under the African fever and in the hospital, eight were taken on board and to sea, the other half being left on shore ; the consequence being that all the former cases recovered perfectly and without relapse, while every one of the remainder subsided into an obstinate intermittent. This is a pointed case on a small scale. A recent and a very conspicuous proof, on a far greater one, of the utility of removing the convalescents from fevers to a healthy district, occurred at Rangoon in the late Birman war ; the troops, in great numbers, which had continued to be sick and incapable of duty for many months at that place, after the fever, having recovered immediately and perfectly on their removal to Mergui. And though I must not suppose that in this particular instance, that proceeding was not adopted as soon as it was possible, it is but too obvious, that, apparently from the lax ideas entertained of

the purpose and value of the change of air, as it is always idly called, in these cases, the greatest neglect has often occurred in similar circumstances, and that the deaths of thousands, as well as the inefficiency of armies, have been the consequence. And if I could produce some analogous facts from my own observation, I doubt not that this class of medical observers can recollect many more, and also better marked, where even the tropical remittent has been actually cut short by simple removal, in cases where circumstances of retreat before an enemy, the necessity of leaving a station, or aught else, has compelled the sick to be removed; and even where death had been expected to follow the mere attempt at a conduct so apparently violent and hazardous.

With such views, and which I trust are not only well founded, but will prove so in practice, should they ever be received among ourselves with favour, it is not easy to contemplate with tranquillity the facts which every autumn exhibits in England, and which that of 1826 has perhaps displayed, as I have just noticed, in as high a degree as any modern seasons have done. In hundreds of places, besides those to which I have just alluded, we might have found in every one of the past years, as we shall doubtless find again,

whole families, even whole villages, attacked one after the other, and individual after individual, with this fever, yet all suffered to remain, in spite of such warning, till all had sickened and many died ; and even those who had recovered, kept on the same spot, in the same house, till relapse after relapse had ruined the patient's health or perhaps terminated his life.

If such carelessness took place respecting the poor only or the lower classes, there is the ample excuse that it is impossible to remove them ; but nothing but pure ignorance can explain this conduct as to the opulent, whose chance has hitherto been scarcely better than that of their inferiors. If I could produce cases at the very moment I am writing this interpolation, where nine, ten, sixteen persons in one house, and in opulent families, have been permitted to take the fever, gradually, in a succession of four, five, and six weeks, with the loss also of some patients, and when the neighbouring land too was a land of meadows and ditches and half the lawn was perhaps a fish-pond, there is no excuse, as there is no solution but in the ignorance of the practitioners. And if that consists in not knowing the value of a change of place, and in not knowing also, or not believing, that such land will produce

Malaria and fever, it is founded perhaps even more on that most unfortunate, yet almost universal error which I am never weary of repeating, that of calling and considering these fevers typhus.

That such is the belief even now, 1826, among the people, and, what is the real misfortune, among practitioners, in spite of all experience, is amply proved by common conversation, by the newspapers, by the very language of practitioners themselves. That such it has generally been, is not less certain and less proved; while successive seasons arise without teaching those to whom experience can teach nothing: not even in Lincolnshire, as I have just said, where at least, the nature of the disorder might have been conjectured, and where the value of the remedy ought surely to be too obvious to be overlooked. And I must think it extraordinary, in physic, at the present day, and so soon after a war which must have rendered the nature of these fevers generally known, that in more than one village, even of Lincolnshire, not to mention hundreds of other places, not merely was the character of these fevers mistaken to the very last, but half of the entire mortality had occurred before the practitioners had made up their minds how the epide-

mic was to be treated ; seeming indeed to have even forgotten that there was such a disease, and expressing an alarm, as well as a surprise, at an occurrence which, if it has been rare in England of late, might have been found from history, medical or ordinary, to have been once sufficiently common ; as it should have been still better known to be the common epidemic of analogous wet situations on the continent of Europe. That I do not name these specific places, which I might full easily do, is that I may avoid a species of criticism which, however useful to the public, might be painful or injurious to individuals.

Here then we see more distinctly, the value of the remarks on pernicious soils and on the propagation of Malaria, which have been detailed in the essay on that subject. It is this study which must form the real basis of the cure, in this as in all the chronic or repeated intermittents. The cure consists in the avoidance of fresh causes, new excitements : and, to be enabled to apply it, these must be familiarly known, accurately studied, and carefully investigated. He who would be the real physician here, must be the acute observer and the philosophical naturalist ; for where he cannot act he must learn to avoid,

since the cure is negative, and in avoidance is the remedy.

And now may also be further seen the value of this knowledge in a more general and geographical view. It is to rush into the lion's mouth, to leave the Malaria of England for the ten times more destructive ones of France and Italy ; and thus it is that the foreign travel which is intended for the cure, becomes too often the aggravation, or perhaps the source of death ; as it sometimes thus is, when resorted to for chronic diseases whose nature is misunderstood, and which are misnamed ; for disorders which, in reality, depend on the same causes, or originate in the very Malaria, to which, in a degree a thousand times more diffused and active, they are sent for a remedy.

I cannot enforce this in stronger language ; while I wish I could believe that this would have the effect of making careless physicians pause in their recommendations of foreign travel, or at least inquire what the country is to which they send their unfortunate patients, too often from weariness or the dread of reproach. And if, here also, we can see more distinctly the value of that work so much to be desired, a statistical or geographical detail of Malaria, there is nevertheless

a considerable extent of this knowledge to be procured by those who will seek it in those geographical works and books of travels which abound, and which it is highly discreditable in the physician who thus tampers with the lives and healths of his patients, not to know. Long ago did Smollet, a physician himself, remonstrate against Montpellier, in a much more simple and obvious case ; and yet does a culpable ignorance still consider it the proverbial Montpellier which it was once so falsely said to be.

But to return from a subject which I cannot prolong here, and for which the plan of this essay affords no room, I must now remark as to the cure by change of place, that while that change requires a very obvious selection, on the principles now laid down, it is also often very useful to repeat it from time to time. Thus it will happen that the first change will terminate the present disease, or protract the interval of health beyond the usual period. Still the disorder again returns, and it must then be met by a fresh change ; while it is often successful, even to return to the original place, provided it is not in itself an unhealthy one, as it becomes convenient when the patient's circumstances do not admit of any other. Thus, frequently, may the disorder be kept at

bay ; or the persistence of the several returns is gradually reduced, or else the intervals prolonged, till it finally vanishes altogether.

I need not enlarge on this practice, of which however the inconvenience is unfortunately too palpable, as it is too frequent and too great ; since it cannot often be very applicable, except to the independent or opulent, implying, as it does, so many obvious sacrifices. It remains to examine into the utility of the only mere medicine, besides the tonics, which I know of, namely, mercury.

On the presumption that the chronic fevers of this class were necessarily connected with organic diseases of the visceral glands, this remedy has naturally been recommended and followed. That it does act in the chronic inflammation of the liver as in the acute one, admits of no doubt : but there are many physicians of far greater experience than myself, who doubt with me of its power over the other chronic diseases, the real permanent diseases, or the obstructions, as they are called, whether of the liver or the spleen. But this is a subject by no means so clear, difficult as it is to discover what the exact state or nature of the disease in these glands may be, as to prevent us from trying a remedy which is often doubtless

a powerful one. That it is a practice often rashly and injuriously pursued in the present day, and especially in England, is however but too plain; while it is easy to trace the origin of this pernicious abuse to the physicians of our colonies, and especially to opinions formed and fostered in India.

To enumerate the evils now daily produced, by this medicine, in all its forms, in innumerable disorders and patients, by what a French writer, censuring English practice, calls "*l'inévitable calomelas*," and not only in real disorders but in imaginary ones, and in subjects that may be considered healthy, would be a task worth undertaking; while it is one on which I must not venture in this place. It is, or has recently been, a fashion, almost amounting to an insanity, and which has not merely abused this active and hazardous substance in medical hands, but which has rendered it familiar to those, a now numerous class in this age of universal aspiring, and of assumption especially on the subject of medicine, who take upon themselves to treat their own diseases, real or imaginary, and, still less pardonably, the ailments of their acquaintances. If, besides the unconscious dead, there are thousands living to rue the day when mercury became the Uni-

versal Medicine in the hands of English physicians, there are tens of thousands who, if they were conscious of the fact, should lament the hour when first they imagined themselves qualified to practise that which he who has studied it most and longest finds the most difficult of arts, and the more he studies it, the more difficult: and who should repent too, that they ever knew, even the very names of "calomel and blue pill." Well may entire Europe wonder at English practice; and more still may it express its surprise at that universal self-empiricism, before which all the professed quackery of all Europe shrinks into nothing, and in comparison of which the temporizing *ptisanerie* of France is absolute philosophy.

To return. If the visceral glands are disordered, the cure of these is an obvious claim on the physician, whether they should be a maintaining cause of the chronic fever or not; and a judicious physician will here act with those necessary cautions for which it is impossible to lay down rules. But I must point out one ground of caution as to the fever itself, from ample experience of the evil effects of mercury as to it, and of effects, as far as I have seen, very little suspected.

I have formerly said that its recurrences are produced by any debilitating cause ; and it would not be very easy to find one more active to this end than mercury. As for calomel, as a purgative, injudiciously pursued, repeated beyond utility or obvious necessity, it is one of the most pernicious of the whole tribe ; while even thus it also produces its constitutional action. Inducing salivation, in this or in any other form, I need not point out its effects of this nature ; while its effective use, far short of this, induces also a state of debility which often becomes durable ; lasting long after the proper effects of the remedy have disappeared, and sometimes appearing to last even through the whole of life.

Thus it happens that from the injurious effects of mercury, a chronic disease of this nature is rendered more inveterate ; or new accessions, finally becoming a habit, are brought on, when the disease might otherwise have terminated of itself, as it so often does. And if in persons thus artificially debilitated, the effects of other occasional causes in re-exciting the disease are augmented, so are the sufferings of the patient increased by the feebler powers of resistance opposed to the action of the disorder. I have such unquestionable evidence of the aggravation and the protraction of

these fevers from the use of mercury, that I have often been inclined to doubt whether it should even be hazarded when there is demonstration of visceral disease accompanying it: and if, as is supposed by the most judicious physicians, the fever is itself the cause of the glandular affections, it is plain that the imagined remedy becomes in these cases a poison. Let practitioners at least attend to this fact, and watch carefully the effects of the remedy, for good or evil; and thus will it be comparatively easy to form a correct judgment respecting its propriety or utility. And it is a caution the more necessary, because it has been boldly asserted, and by hundreds, that in this as in all cases of chronic intermittent, mercury is not merely a remedy, but The remedy; a specific; while it is a doctrine by which thousands have been misled.

On the other hand, now, so intricate is physic in every point, there can be no question that in this assertion there is some truth, or that there are cases in which mercury does most clearly produce a cure. That it has produced such cures while it also removed glandular affections, there is no doubt; while it is further possible that the cure of these disorders may have been the removal of the causes of the fever. But it is certain

also, that it does cure this disposition to the renewal of fevers, even when there is the most perfect demonstration of a healthy state of all the viscera. In this case it seems to act by inducing a new disease, or an entire change of habits; just as acute diseases of various kinds remove it, or it is removed by any other important change in all the habits. Thus have I seen habitual fevers of this nature gradually disappearing under the use of mercury, while it was easy to trace the progressive connexion between the effects of the remedy and the diminution of the disease.

How impossible it is to give rules for judging of the cases in which it may thus be useful, must be very obvious; nor can it be judged of but by the physician's own discernment. But with respect to its administration, my own experience has shown that it ought never to be so pursued as to induce its obvious effects, or even any marked debility; though I have at the same time seen cases where, on the occurrence of the first symptoms in the mouth, a habitual remittent of many years standing had disappeared to return no more. Nevertheless, a temporizing practice is perhaps the most generally applicable, as it is the safest, while it may thus be sometimes carried on, even for years, with perfect security, with the

final cure of the disease, and with no apparent evil results.

So uncertain is medicine, and so difficult must it continue to be to reason respecting it, while we remain so imperfectly acquainted with all its fundamental principles. I shall only add here in concluding this account of the means of cure, that where mercury has been thus found to cure what is called dyspepsia, I have much reason to believe that the cases have sometimes been truly the slighter fevers of this nature which I pointed out formerly. Yet I must subjoin, that if I have here omitted to notice those varieties of the remittent which I have called anomalous, it is because as far as any peculiar treatment is required, this will be better reserved to the place where I shall discuss the remedies of anomalous intermittents.

CHAPTER V.

On the Dysentery and the Cholera.

SINCE dysentery is one of the most important and severe of the disorders produced by Malaria, I could not absolutely omit all mention of it, inasmuch as it might be supposed that I had either formed erroneous views of its cause and nature, or did not perceive that it formed a most important link in that great chain by which pure fever from this cause is connected with the local affections which that also produces. But if I am unwilling to treat of this disease under the limited and imperfect experience which I possess respecting it, and which is not easily attained in this country, while I can at the same time refer to authors out of number, from whom I could but compile and whom I ought not to pretend to elucidate, I am scarcely less disinclined to inquire respecting its proximate cause, or in what manner and from what circumstances it differs from fever, seeing that it is produced by the same general cause, Malaria. Yet in future parts of this essay, there will be found some remarks respect-

ing the localization of this class of disorders, or as relates to partial affections or symptoms superseding a general morbid effect, or united with that, which will perhaps convey some idea of what I would have said on this subject, had our knowledge been such as to allow of more accurate and definite language than it is possible to apply to such discussions at present. To illustrate, slenderly, what is here meant, we have, in severe cases of the remittent fever, that local affection of the stomach which causes the black vomit, that analogous one of the liver which produces what are called bilious symptoms, affections of the head, and so forth, besides all the more rigidly local and partial diseases of which I have here treated at some length. It is not therefore difficult to comprehend, yet very generally and broadly, how such localization, or determination to the intestines, may produce dysentery; while this will vary as fever is conspicuously combined with it, or as the local affection is such as to supersede in a great degree the general one: while yet further, it is easy to imagine that if the affection in question should attach preferably to one or to another portion of the intestines, to the duodenum for example in one case and to the colon in another, (a fact very conceivable from

their differences in character, structure, or sensibility,) all the varieties of dysentery as to the most obvious effects might be the result.

Such a view, put into other language, becomes similar to that French theory, often differing from former ones only in its terms, which supposes dysentery to be an enteritis, or to consist in an inflammation of the mucous membrane; to be, according to circumstances, a gastro-colite, a gastro-duodenite, and so on. It is however, as thus expressed, little more than a theory of words; when the very same affections are held to be the cause of remittent and intermittent fevers. There is much more required before we can explain to those who look beyond words, why the same poison should in one instance produce mere fever, and in another mere dysentery; particularly if, in both, inflammation of the same organs is esteemed the proximate cause.

Thus much at least of what may approach to a theory of dysentery, seemed necessary for the purpose of tracing its general connexion with mere marsh fever. In our own country, it is neither frequent nor severe, while the treatment is in general equally simple and well understood: and as it occurs in other countries and climates, it has been so amply described by numerous

authors, that any notice of that would be as superfluous as inconsistent with my plan. I shall only remark, that, with us, it is very commonly mistaken for diarrhea by the mass of ordinary practitioners; a recent notorious example of which I need not call to the reader's mind: while, fortunately, being generally slight under this error, and while there is also no small confusion respecting the proper treatment of mere diarrhea, no great injury is the consequence. I should remark however, that whatever well-known and essential distinctions there may be between dysentery and diarrhea, there are instances in practice, where in an autumnal disease of this general character, arising in persons exposed to Malaria, the term diarrhea is the most applicable; as it is in reality given, and especially by those, the very great majority, who are not aware that our own diseases of this leading appearance are the produce of that influence. Hence an excuse for the original error as to the Penitentiary; while I can add, that in a parallel case often submitted to my temporary charge in former days, namely the Woolwich hulks, every symptom of the autumnal disease in the very great majority of patients, which often included the whole of the prisoners, was that of diarrhea,

and nothing more ; so that but for the collateral and obvious circumstances of place, season, and so forth, together with the occurrence of some marked cases of true dysentery out of the number, I should have pronounced it an ordinary diarrhea. In reality, there does not seem any very marked limit in practice between these two disorders, however theoretically different : or rather, while there are diarrheas which bear no relation to dysentery, there is one, arising also from Malaria, which is not radically distinct from it. And I imagine that this must be nearly the opinion of French physicians acquainted with the distinct production of Malaria ; because a diarrhea of great obstinacy is marked as one of the endemics of those situations. Nor is this difficult to understand theoretically : as it is easy to imagine that the local peculiar inflammation which is the cause, may vary from the simplest affection to the most violent ; from little more than mere irritability to positive ulceration.

Here also, and for the same reasons, I cannot avoid putting some queries (I cannot well call them more) respecting cholera, and particularly respecting the disease so termed, which has of late excited such attention in India. It is necessary to speak with caution of what we have not

seen, and of a disease indeed so very imperfectly described, that it is far from easy to comprehend what its nature and characters are. Yet from some facts that have been related to me by accurate observers without system or prejudice, officers ignorant of medicine, and therefore, as I believe, the more to be trusted in a case of such evidence, I cannot help concluding that it is a disease to be added to the products of Malaria; notwithstanding the decided opinions to the contrary which have been held by some of the disputants on this question: an opinion which rendered it imperious on me not to pass it without some notice, however slender and conjectural.

Of these facts, one will answer the purpose as well as the whole; since the nature of all is the same; while that which I have selected is pure, or free from distracting circumstances.

A frigate had cruized long on the coasts of India where this disease was raging on shore, retaining her health however, and, as was believed, by rigidly avoiding any communication with, or even approach to the land; the captain's conduct in this respect having arisen from his experience of African fevers. Being on one occasion at anchor about three miles from the shore, the land

wind came off to the vessel, and with such effect that the usual smell attending Malaria, well known to the officers and men from their African experience, was immediately sensible. There was not at this time a sick man on board, while there had been no communication with the land for many weeks: and the alarm being immediately taken, the vessel was ordered to weigh for sea; while, as had been the constant practice, every man not wanted on deck was ordered below, for the purpose of avoiding the effect of the Malaria thus blown off to sea in the manner which I have described in the essay on that subject. An accident having happened to the iron cable, the armourer was the first man employed, almost alone, on deck, in disengaging it; and though in perfect health when he came up, he was immediately seized with giddiness, was quickly rendered incapable of proceeding with his work, became insensible within three hours, and died of this cholera, which also seized on four of the crew before the vessel could get under weigh; the whole of them dying in the same manner.

Such evidence as this seems to establish that a Malaria is the cause of this cholera also, to whatever circumstances it may be owing that the

produce is not the usual fever. And if so, it may be conceived to be in a state of unusual activity or virulence; the effects in question bearing an analogy to what sometimes happens in the plague. In this disease, further, the local affections of the stomach and bowels, or of these and the liver together, are the most remarkable symptoms; or we may consider it as a localized remittent of peculiar severity, and with two or three local affections at one time. Thus, to illustrate, it might be compared with black vomit, with dysentery, and with ordinary cholera, all united; or as also happens, with the two former combined, without the third: or, at one and the same instant, there is a local action in the stomach and in the liver, the first, if not precisely the black vomit, being a state analogous to that, or intermediate between it and the more moderate affections of this organ occurring in remittents of less severity.

If this view be the correct one, this most remarkable disease is not the proper cholera known to us, but is rather a peculiar remittent with local affections, at once numerous, extensive, and violent; a fever in which minutes perform the destructive duty of hours, days, or even weeks, or in which, from its rapidity, there is scarcely an initial stage; as if the disorder had commenced

where it more usually terminates. Under such a view, it is almost superfluous to say how little are the hopes of a cure, at least for the severer cases, by any means as yet in the possession of physic.

This is all that I can venture to say on a disorder which I have not seen, and respecting which what I have read (which is I believe all that has been written) has not given me any very definite ideas. Whatever obscurity as to its cause or nature remains, thus much at least is certain ; since the solitary case which I have recorded is as perfect as a thousand could be, or since it is one of those pure facts which, in science, forms evidence as complete as the greatest number could do, and infinitely more so than a million of cases where the same simplicity is not present. That deduction is ; that this cholera is the produce of an atmospheric transportable poison, generated upon or by land, resembling therefore Malaria in all its obvious properties and origin ; while if it is not the same Malaria which produces remittents, and the disease is not a mode of that great class, there must be Malarias of different chemical natures, capable of producing very distinct disorders.

This was a question brought forward in the

essay on Malaria and left unanswered: while if it shall be concluded that this is the fact, then may there be many more Malarias, as was suggested in that place; or the several kinds of fevers, as well as of other disorders, namely, tertian, quartan, remittent, and so on, together with their endless modifications, and together also with cholera, dysentery, and even the several neuralgias, may be actually dependent on Malarias of as many different qualities or chemical modifications. Thus will each variety be productive of its specific disease, as the different contagions are; though should this appear groundless or false, we must rest in the original belief that these different disorders depend, severally, on quantity or virulence, as I have suggested above, or on collateral circumstances influencing the body as predisposing and modifying causes; since we have but that apparent alternative. All this is indeed but conjectural, or possible: but it opens wide views respecting a subject of great interest both in a chemical and a medical view; and a subject also which I do not despair of seeing hereafter elucidated by that chemistry which is yet destined to do for us, things of which we have despaired, and much also respecting which we can scarcely now even form a conception.

And this leads me also to offer a few remarks of a similar nature on the genuine or ordinary cholera, since this too seems to be one of the disorders that is produced by Malaria. Here also I shall not treat of a disease so well known and so common ; as English experience does not suffice to enable, probably, any one to understand it thoroughly, and, still more, to question the prevailing opinions and practice.

It has been generally thought, that the action of the sun, or of heat simply, long continued, if our climate is in question, less necessarily protracted in a tropical region, was the cause of cholera ; or that, from such an action, the liver became gradually disordered, so as at length, and by a species of accumulation, to break out with the symptoms of this violent and singular disease. The same doctrine has been applied, I need not say, to autumnal or remittent fevers in general, as occurring with us in England ; while I have here attempted to show that this hypothesis is gratuitous or conjectural, if not as yet demonstrably in all, yet at least in the great majority of cases ; and that whatever this cause or others may effect, the true or prevailing source of such fevers must be sought, in our own, as in the hot climates, in Malaria ; though that is sel-

dom or never noticed, from inattention to the natural history of this poison, or from ignorance as to the soils which produce it, or from prejudices respecting its exclusive attachment to the swamps and marshes of Italy and Holland.

With respect now to cholera, I have here, in speaking of remittent, followed the common opinions in supposing that mere heat could affect the biliary system, and thus modify the nature of such a fever; nor am I about to question openly that this may not be the case, and that perfect cholera may not be produced without the presence of Malaria, however I may think it necessary that this subject should be reviewed by a fair series of observation, instead of being taken for granted, as has hitherto been the case. Yet let us remark the following circumstances; and we may then perhaps be inclined to doubt whether the prevailing theory is the true one, and whether this disease, like remittent and dysentery, is not the produce of a cause common to the whole: the distinction consisting in the part or organ to which the local action is determined.

If heat alone were the cause of cholera, it should be produced in the earlier parts of the summer, supposing that such summer had been both early and warm; or if it required one month,

or two, of the sun's action to generate this derangement of the liver, it should be indifferent at what part of the year that was exerted. The same argument indeed applies to the case of remittent; equally, and probably under the same error, supposed by many physicians to be the produce of mere heat. But, in practice, cholera, as well as remittent, is a disease of autumn; or it appears together with fever and dysentery, after a long, or a certain, duration of heat, and when, as is now admitted in as far as remittent and dysentery are concerned, some change has taken place in the vegetating surface of the soil, to which is owing the production of Malaria.

Further, cholera belongs, predominantly if not exclusively, to the same climates, the same soils, or, generally, to all those countries and places in which the other diseases of Malaria abound; and if as numerous in respect to cases as these are in such places, resembling them also in severity. Reversely, it is rare in the reverse climates and countries or places. Of this we shall easily be convinced, even in our own; as the most superficial examination will show that this disorder is common where fevers are common, and rare where they are rare, that the places where both appear are precisely those which indicate the ex-

istence or probability of Malaria, and that autumn is equally the period of all. What may also serve to confirm this is, that where the present autumn 1826, like some of the preceding, has been remarkable for the number of fevers, these having been also conspicuous for heat and for the prevalence of east winds, cholera has been far more frequent than in former and distant years; and that it has thus appeared even in Scotland, and always most remarkably in low and wet situations, where its existence had been formerly unknown.

Such are the direct facts which may lead us to infer the common origin of these several diseases, or to attribute cholera to Malaria, even though we cannot assign the accessory cause which determines the action of this poison to the liver in such cases, rather than to the brain or the whole nervous system, as is probably the case in fever. But this offers no further difficulty than dysentery; since here also, through causes which we cannot at present discover, the chief action of the Malaria is exerted on the intestines, and still more remarkably on a specific portion of those. As to these difficulties indeed, or in as far as the collateral causes which determine the local action of Malaria are concerned, they are far too nume-

rous to cause any surprise that we cannot assign them for the case of cholera: since, as I have shown in other parts of this essay, the same poison, at the same time, and in the same place, acting on different persons, produces, not merely fevers, remittent or intermittent, but local diseases of very different kinds, even to the simplest painful affection of a minute point in a nerve.

And this, which I have thus reserved, is the great argument against the opinion just thrown out, and stated also in the essay on Malaria, that there are different qualities of this substance capable of producing distinct diseases, or their actual causes. If one spot can produce every species of these disorders in different individuals, the cause, it may be said, must be sought in the individual himself, not in the poison; or, that being the same for all cases, it is to influencing or collateral causes that we must attribute the specific forms or varieties of disease produced. The conclusion seems incontrovertible; and I am fully aware of the difficulty of maintaining the reverse opinion against this fact. And yet if that opinion is not, in some measure at least, founded, how are we to explain the familiar circumstances stated in the essay on Malaria, namely, that certain forms of fever are peculiar to certain places

and countries, and that these differences are often no less marked than they are constant? I must confess at least my own incapacity; with my own willingness to believe any thing; provided it be proved: while I think it best to state every difficulty and every contradiction, since where we do not know, the best proceeding always is to satisfy ourselves very clearly of our ignorance. To return to the question of cholera.

Certain analogies may also be produced to confirm what seems to be thus indicated; and it is perhaps obvious that I am about to allude to the case of inflammation of the liver, the produce, as I have elsewhere remarked, of the Malaria in certain countries; as in India and Africa notably, and, if less remarkably, in the West Indies also. Here, the poison that might produce fever, exerts a sole or a predominant influence on this gland, generating inflammation; as, in a different set of cases, it may affect muscles or membranes, and cause rheumatism. And if it can produce inflammation of the liver, it may equally produce cholera, since both are apparently increase of action, though in different sets of vessels: while that possibility is further confirmed by other cases described in this book, where the action of Malaria on a glandular system is

demonstrated in the production of diarrhea and diabetes, or where the febrile disease becomes localized in this peculiar manner.

Another analogy in confirmation of the same views, is found in the character of the remittent fevers called bilious, and very especially in those where the affections of this system form a conspicuous part of the disease. Such is, notably, the usual fever of Walcheren, known in the country by the name of the gall disease; and such, I need not say, are the still more noted yellow fevers in many cases. In all such instances, though with various modifications, we may consider the disease as a fever with cholera, or a mixture of the two, while as the one or the other may predominate, the character of the disorder or the case varies. Or, with the general action on the nervous system, generating pure fever, there is a local one on the liver, productive of cholera; just as occurs with respect to dysentery, or as also happens in the much less serious disorders of this great class, where a Neuralgia may be accompanied by a perfect and marked intermittent, or where that may be nearly insensible. Thus, to put extreme cases, we may conceive that in the simplest ordinary cholera, there is only the local affection, or the general one is

so slender as to be unnoticeable ; while where a remittent is accompanied by the slenderest possible symptoms of affection of the liver, or becomes a moderate " bilious fever," we find a case the exact reverse.

I shall not dwell on this subject longer : but such are the views respecting cholera which seem to me borne out by analogy and by direct evidence both ; though willing to be corrected by different views of facts, as far as such views may be founded on similar grounds ; on real evidence, not on medical dogmas. The value of such a theory, as to the practice in this disease, may not indeed prove much ; but it will always be advantageous to investigate the truth, and, if that can be done, to bring our scientific views of diseases into a more philosophical shape : besides which, should this view of the cause of cholera be the true one, we shall have made the same step as to its prevention as we have done in the case of fever and much more. This is at least a main object of the present inquiry, if it is not the principal one : it is that which was the chief inducement to write this brief chapter on a concatenated set of disorders which it was not my intention to discuss fully, and on the cure of which, well understood as it is, I do not propose to treat. My

medical readers will, I trust, not forget what the object of this book is : that its purpose, throughout, has been to explain, under new views, what appeared to me imperfectly known or misapprehended ; not to produce, and least of all to compile, an entire system respecting a class of diseases which, at some future day, will justify a new compilation in the hands of some systematic writer.

CHAPTER VI.

On Intermittent Fevers.

So much has been written respecting intermittents, and, I may add, so well has this been done, that it may almost appear presumptuous to meddle with that subject again. It is at least superfluous for me, in this place, to dwell on the more obvious forms of this class of fevers: but while I have undertaken to mark the more obscure and complicated cases, I cannot avoid entering on the whole subject, at least to a certain extent; trusting to my medical readers to supply from their own knowledge and from the crowd of authors on this disease, what I purposely omit that I may not unnecessarily prolong this work.

Nor, even had it been superfluous to note the obscurer cases of intermittent, to record my own observations, and, still more, to repeat what may be found in authors, could I have avoided such an examination; since the whole of the local affections, which may be ranked under Neuralgia, so long and so generally misunderstood, are intimately connected with these, and since the proofs,

as to their real nature, must be deduced from their connexion with such obscure intermittents. Thus also while, under the present view, it will be proved that many disorders which, generally, under the popular one, appear to be original and separate diseases, are but symptoms dependent on intermittent, as has already been shown in the case of remittent, I shall not only smooth the way for understanding these anomalous and troublesome disorders, but, further, explain much that must otherwise have found a place in a different part of this essay, and often in a less luminous manner or position.

That intermittents, of whatever type, are the produce of Malaria, is a fact as universally established as any thing in medicine can well be; while, as I have formerly observed, it is by no means proved that there is any other cause, at least of the original disease, or first attack, however such causes may have the power of re-exciting an intermittent where it has once existed.

If I have already shown that it often follows remittent, when it may be considered as, in fact, the same disease, but with paroxysms and intervals differently arranged, so it is often a primary disorder; or the first effect of Malaria is to produce an intermittent of some type, and not a re-

mittent. Arithmetically, it will further be found that this effect of Malaria predominates in the colder climates and the colder seasons of the year; or that while remittent rather than intermittent is the disease of hot climates, and of autumn or summer, the latter is most frequent in the colder climates and in spring. How far this variety of effect may depend on the quality or quantity of the poison, and how far on the conditions of the human body, I have already said all that I know, and all, I believe, that physicians appear to know on a very obscure subject. And having sufficiently noticed the manner in which it follows remittent fevers, I may now limit myself to the consideration of the primary or original disease.

The attack of this class of fevers seems, like that of remittent, to follow sometimes instantaneously on the application of the poison, while in others it is protracted to analogous distances in time; though I know not if physicians have fairly observed that it may be later than twenty-four hours from the exposure to the cause. This is a difficult observation to make; but having already discussed the subject as to remittent, I must leave it to others to attach that credit to authors, on this point, wherever they have sup-

posed the interval longer, which they may seem to deserve.

The attack, in the ordinary cases, is marked by what is called the cold fit ; and the recurrence of this peculiar state indicates equally, if under many modifications, the commencement of each new paroxysm : or the whole disease is a succession of distinct fevers, limited, each, to periods varying from an hour or two, to twenty or more, and separated by intervals of what is called health, imperfect as that may often be ; conditions which are, at least most generally, not states of fever, be they what they may. The term cold fit, however, conveys a very imperfect idea of the actual nature of this singular stage. There is a sense of coldness, it is true, and often excessive, attended also by shiverings in many cases, and sometimes so violent as almost to amount to convulsions, attacking every muscle of the body, or occasionally limited to a few. But be the sense of cold what it may, it is very distinct to the patient's feelings from that which belongs to catarrh, or to the accession of any of the other diseases which commence in this manner : insomuch that patients suffering under chronic ague, can determine at once, by the peculiar feel, whether a cold fit is the recurrence of that disorder or the indi-

cation of another and a different one. It is not situated in the skin alone, in this case, as it most commonly is in other cases of incipient disease, but appears to penetrate even the bones, and to occupy every fibre of the body; while it is accompanied with an indescribable sense of universal pain, and of a fatigue resembling, but far exceeding, that which follows long-continued and excessive exertion; fatigue which no rest or position diminishes, and which seems often to cause the greatest sufferings of the patient. With the cold fit also, there generally attends that distressing pain in the loins which belongs to all fevers, and which, from the very peculiar kind of suffering attending it, appears to have its seat in the numerous and large nerves of that region.

Headach and unquenchable thirst are also frequent symptoms of this stage; while so far from the temperature of the skin being necessarily lowered, it is sometimes hot, while dry, to the touch, even when shrunk and pallid, though it is much more common for it to feel cold to the bystander: in which cases the shrinking is extreme or almost approaching to lividness, as if from the effects of external cold. Thus also, yawning often attends the cold stage; and sometimes to such a degree of irrepressible violence, as to

threaten the dislocation of the jaw ; as spasms in the muscles of the throat produce involuntary sounds, which a bystander often supposes to be the produce of feebleness of mind. In this stage, the pulse is generally contracted, hard, and accelerated, in different degrees ; and not unfrequently this state precedes, when watched, the sense of cold and shivering, or is the immediate warning of the cold fit.

It is to this stage also, that the comatose state so common in intermittent belongs : frequently present, though in different degrees, sometimes producing short fits of painful sleep and more painful waking, and, in certain cases, so profound as to resemble apoplexy. I already noticed this circumstance as marking the first attack of the remittent fever, in Italy notably ; and while it occurs similarly on the attack of intermittent, so it often, even in the chronic disease, is the sole apparent cold fit, or takes occasionally the place of the more regular attack. As I shall hereafter show, and have indeed already pointed out, it is a most important variation to notice, from the dangerous errors in practice to which it leads. Of other accessory symptoms, the only one requiring notice at present, is the increased secretion of urine.

When death is produced by intermittent fever, it sometimes happens in the cold stage, though it is in quartans chiefly that it occurs at this period ; being apparently the produce of the same action, whatever that is, which causes the apoplectic symptoms. In other types, and consequently in the great majority of fevers, it is the hot stage which is the period and the apparently immediate cause of death. The duration of this state is extremely uncertain ; since it may terminate in almost a few minutes, or last many hours ; while the severity of the paroxysm, as of the entire disease, is generally proportional to that of the cold fit. In the perfect form of the disorder, it terminates in the hot stage. In this, the sense of cold is succeeded by that of burning and dry heat, of which the indications are sensible in the feel of the skin, and by thirst aggravated, with continuance or aggravation of the headach ; or as sometimes happens, the headach and the thirst commence with the hot fit. If the sense of fatigue diminishes or disappears, the pain of the loins commonly continues, while the pulse becomes generally freer, though still continuing rapid and full.

In severe cases, delirium occurs, or is a substitute for the coma of the previous stage ; but

painful as the hot fit may be in all the ways that fever is distressing, it is very commonly a relief from the much greater severity of the cold one, if that at least has been long. Anxiety of the præcordia, the common symptom of all fevers, also frequently attends this stage, as it does the former; sometimes with more decided affection of the heart than that which had preceded, and also with spasms, apparently in the larynx, or throughout the pulmonary system, producing a distress often amounting to the sense of imminent death. This affection, when remarkable in proportion to the other symptoms, seems to approach to that variety of the disease to which the term "asthmatic," is given by nosological writers; however that peculiar modification may sometimes be of a much more decided and distinct character. The painful restlessness so common in fevers, also belongs chiefly to this stage; and in slighter cases, is sometimes even the symptom which attracts most of the patient's attention, or may cause the chief suffering. The duration of the hot stage is, like that of the cold one, very uncertain, as it may equal, or exceed, or fall short of it; while cases occur in which the former occupies a large proportion of the whole fever, or is almost the only very striking part of it; as, on

the other hand, the cold one may acquire a similar predominance. Let the disease be modified as it may, it would not be very easy to point out one which condenses into so short a space a greater quantity and variety of suffering: while, to a spectator, it may appear but a small evil, to be cold, and hot afterwards, for a succession of hours; such is the effect of the common ideas attached to those two terms, while so very little do those terms express the facts.

In the regular disease, the hot fit terminates, like the cold one, after a certain time, and is succeeded by a relaxation of all the symptoms. The pulse becomes fuller and softer, and more natural in every way, the pains and the thirst disappear, and a perspiration occurs, often extremely profuse; at the termination of which the patient is free from obvious disease, however enfeebled he may remain. It is a critical solution of a fever; and is a miniature, in point of time at least, of what sometimes occurs in the fevers of longer duration. It is not unusual however for nausea, or vomiting, to come on before the period of fever is finished; and far most generally in the cold fit, which it sometimes terminates: and, as I shall hereafter show more particularly, when this symptom is conspicuous compared to the

others, there is produced a variety to which the term Emetica has been applied.

It only remains to notice the state of the mind during the fit of intermittent; and it is chiefly important on account of its effects on the conduct or feelings of the patient, in those cases where the bodily symptoms are less striking, or in the very obscure or milder disorders of this nature, whether chronic or otherwise, in which this appears to the bystanders almost the only disease. To judge correctly respecting its cause, is most necessary; as well for the sake of the moral judgments that may be formed as to the patient, and for his consequent comfort, as for the self-regulation of his own mind and conduct. If these remarks concern rather the chronic and milder diseases than the acute one, in which the visible severity of the fever seems to justify or excuse moral aberrations, it would be inconvenient to divide them, while it is necessary to mention the facts here.

If the state of the mind in intermittent resembles that which occurs in the remittent fever, already described, it seems to suffer more generally and more severely from irritability; while the existence of this condition in chronic cases, when scarcely any other symptoms are very conspicu-

ous, or when habit has almost reconciled the patient to them, never to be reconciled to this, renders it especially worthy of remark. This state of feeling attends the cold fit especially ; and hence it is that it is more common in intermittent than in remittent : while, as it is often coupled with feelings of inexplicable misery and despair, and with false views of every thing, it produces those often formidable, and always distressing consequences which are so common in this disorder. And if, as a portion of the cold fit, it generally subsides with that, or disappears during the interval, it is, sometimes, the only, or almost the only symptom attracting the attention, either of the patient himself or his circle. It is in fact at times, the sole cold fit, or almost the only disease ; though a watchful eye may always discover that it is connected with that collapse of features or change of expression which attends every cold fit of intermittent, and, very commonly, with that peculiar physiognomy, easier recognised than explained, which, to an observant eye, is always sufficient to indicate every disease, general or local, connected with intermittent, or arising from Malaria ; an appearance which, when more strongly marked in the pallid hue of the face and the shrinking of the nose, ought to decide

the question, even to the most negligent observer.

Of its true nature and cause, be the moral results what they may, no doubt can be entertained, because of the suddenness of the attack and of its periodical character; and it thus happens that almost in a second of time, and even in the midst of active good humour, or passive feelings of comfort or happiness, the fit of ill temper, or irritability, or despair, of a moral change under modes too various to detail, will occur, to last as long as the cold fit would have lasted had it been present; or lasting, when that is visible, just as long as the duration of the peculiar physiognomy which I have described. To be aware of this fact and this cause, on the part of the patient's circle, is to be furnished with reasons for making that charitable excuse which is seldom made, if ever, for what self-control might be supposed capable of preventing, and perhaps not much oftener for what is unavoidable; so rare is this species of charity: for the patient to be aware, himself, of the cause, is to furnish him with a guide for his own conduct in these circumstances, and a check over the display of those feelings; while it is also to offer him the consolation of knowing that it is his body rather than his mind

which is diseased ; that his perverted temper is not a moral and voluntary fault or failing ; but as involuntary as it is capable of being remedied. I need scarcely say how easy it is for ignorance and intolerance, the intolerance of good health, and sometimes of what is not so pardonable, to combine the peculiar physiognomy of this disorder with its peculiar effect on the mind, and thus to suppose that the moral disease has affected the physiognomy, confirming the erroneous judgment ; when both are the parallel and independent effects of a third and inevitable cause. Nor need I repeat, how, as in remittent fever, such a disorder of mind, ill observed, is mistaken for hypochondriasm ; as is also a very common case.

I have here described the milder moral derangements in the milder and chronic intermittents ; but in severe cases of both, the united state of irritability and despair is apt to produce the far more serious effects of stimulating the patient, at least to think of suicide. This insane desire is a very common complaint of patients labouring under intermittent, and a very frequent source of great alarm and horror ; while it occurs equally in patients who, before that, were cheerful, as well as youthful, in the female sex as in the male, in persons where, either from previous

knowledge of their opinions and characters or from observation in the absence of the fit, we are quite sure that it cannot depend on a wrong state of mind or of opinions, but is as rigidly a portion of the disease as it is found to be a periodical one. And if in many cases, patients even of this unsuspected character, have desired that windows should be screwed down, that no edge tools should remain within reach, and so on, it is to be suspected that actual suicide, occurring as it does so often without any apparent moral motive, has been the result, in other characters, or in severer states of the disease, or in cases where a peculiar facility has been united to this morbid and accidental temptation. It is not often indeed that patients will confess this feeling to their physicians, far less to their friends; being unaware of the cause themselves, and dreading naturally the censure that would follow; but the physician who has not met numerous cases of this nature, must either be very unobservant, or ignorant of the real disease under his eye, or else unfortunate in not acquiring the confidence of his patient.

How important it is that the patient, and the friends equally, should be aware of this moral effect of intermittent, and of the real causes, it is

far too obvious to point out; and this explanation will, in particular, be a great relief to the minds of those who, under these circumstances, have been haunted, for even years, with this species of phrensy or alienation of mind; since it will be to relieve them from fears respecting their moral condition, so painful as to be generally concealed with the greatest care; while, by holding out its real nature, and also the prospects of a cure, it will operate as a preventive to such rash conduct. It is well known that the desire for suicide is often exceedingly temporary, even when it is most overpowering; and I remarked formerly when treating of Remittent, that if controlled with resolution, for even a short time, it will pass away.

That such cases are often, very often, connected with the disease in question, I entertain very little doubt; and it were to be wished that this could be more generally known and believed than it is ever likely to be from all that I have here written. I need only add in this place, what I formerly indeed pointed out slightly, that as all modifications of delirium are increased by the solitude and silence of night, so does this desire for suicide become strongest in those circumstances, should night chance to be the period in

which this fit occurs. If I have known a man high in intellect as in rank, a general officer who had brought this disease from Spain, enter his mother's bed in the night, in this state or agony of mind, it is not difficult to understand how it may have led to actions of similar aberration and far other consequences. Such, as I formerly suggested, is the probable explanation of a noted murder which I then quoted: while it is abundantly easy to see how the presence of the passion of anger rather than that of fear, as in the case just noticed, might tend to murder, as the other would have produced suicide.

There is another remark yet, which it may be worth while to make on this mental disease, whether or not it is really connected with intermittent in all cases. I have clearly ascertained it to be so, at least in some; or rather, every instance of the desire or attempt in question under this peculiar variation, which has come under my knowledge, has been a case under intermittent. As relates to the desire, the simple fact is, that the patient feels a species of antipathy against some peculiar part of his body, added to the general disordered feeling, or he longs to commit the act by wounding that particular point; while, whether his aberration amounts to the desire of

suicide or not, this very point or place is the one eternally forcing itself on his imagination as an object of hatred and revenge. And so perfectly insane is this feeling, that I have been informed by more than one patient who has suffered from it, that there is no conviction at the same time that death would follow; or rather that the impression is as if the offending part could be exterminated or cured by the injury, and that the patient would then be well. And that suicide has actually been committed under this particular aberration, is well known from the more curious records of physic; while I need not do more than suggest one peculiar part of the body which has been often the offending and selected point; the act having been sometimes also, but not always, followed by death. Nor has the motive always been a religious one in this case: and even when that may have happened, I believe the fact to have generally been, that the corporeal feeling, with local antipathy, precedes; exciting, by an obvious association, that peculiar false reasoning coupled with religion, which appears, reversely, to be the cause of the particular antipathy; and the more easily if religious fear or anxiety chances to be a ruling passion. How this may happen, metaphysicians will be immediately aware. The

bodily sensation is one that has been accustomed to excite mental associations ; while, by a natural and common reversal of the order of the train of thought, the mental feeling becomes the apparently primary one, and the cause of what follows, in an order that I need not explain further.

To shorten a curious subject on which it would be abundantly easy to dilate, and to omit examples, some of which must be well known to medical readers, and one of which cannot be recollected without some regret, by most persons, the philosophy of this, as far as my opportunities of observation have gone, and on the indicated ground of explanation, for these cases at least, is, that while the irritable, or jointly despairing and raging or angry state of this chronic fever is present, there is also a particular part of the body affected by an uneasy but undefinable sensation, such that the mind constantly reverts to it as a source of suffering. And if this local affection is not a Neuralgia, or a condition of absolute pain, yet it is a local and nervous one of an analogous nature, always returning to that one point under the same stage of the fever or delirium. When, as is not unusual, it is seated in the head, it is even distinguishable by a dull pain, or a confusion, or a sense of “ buzzing ” (for thus it is

described by patients,) in one fixed place, indicating pretty clearly its real nature: while, in that particular case, I have the assurance of such patients, that the suicidal desire is exclusively directed to that individual spot, and that while a pistol would be the only acceptable mode, there would also be no satisfaction unless that were directed to this actual and only point. But I will cease, and allow physicians to exert on this solution of no easy question, the ingenuity which has not hitherto succeeded in producing an intelligible explanation.

Such is a general description of one paroxysm of the intermittent, or of a single fever. I have meant it to be but general, and as representing the more ordinary average of cases that occur in our own country; while if it is nevertheless long, it is that I wished to detail, as an observer, some particulars which have not been described, and others which, in the ordinary modes of describing this disease, do not make a sufficient impression on readers; and also, to dwell especially on certain points, the interest of which belongs to the obscurer cases rather than to the simple, acute, and highly-marked disorder.

Let me however, even in incurring some repetition, describe a perfect, I had almost said the

ideal and abstract form of a paroxysm of intermittent, that I may not be accused of too far abandoning the ordinary practice of medical writers. The commencement is marked by weakness, weariness, restlessness, indescribable uneasiness, melancholy, depression, or fear, and generally, yawning, often extremely violent. The skin feels cold to the touch before the patient is sensible of coldness ; and it is then pale, or puts on the gooseskin appearance ; the face, and chiefly the nose, assuming also a very peculiar aspect of shrinking and subsidence, with the air of misery ; and often becoming, further, of a greenish yellow, or a clayey tinge, or even of a livid hue. The feet first become cold, when the trembling follows ; but the coldness may be partial or general, while a sense of internal heat is often felt ; the skin also becoming hot to the touch towards the end of the cold stage, while the patient still suffers under the sense of coldness.

In this stage, the pulse is small, frequent, irregular, and, sometimes, not to be felt at all : the breathing is frequent and anxious, and there is sometimes cough, often sighing, with tightness and oppression about the præcordia. Stupor or coma is not unfrequent, but there is rarely any delirium till the hot fit : and with that, there is

numbness, together with a diminution or loss of the sight and hearing. Pains of the limbs, and chiefly of the back, also accompany, with shrinking of the skin and extremities, often attended by the drying up of ulcers and the subsidence of tumours, should those be present; and violent thirst never fails to take place. If nausea and vomiting occur in the hot stage, they chiefly belong to this one, happening, particularly should the liver be affected; and the evacuation in this way, of bile, sometimes a similar purging also, is the consequence.

Such is the cold stage when extreme, lasting from minutes even to many hours, but most short as the paroxysms are more approximated or the fever most severe. The hot fit follows, and immediately after the vomiting, should this have occurred. The skin now swells, and the features enlarge; the temperature rising sometimes as high as 105, with a burning sense of heat to the touch as to the patient himself. The pulse becomes strong and full, increasing also in velocity, to even 120 and upwards; the sensibility, to noise and light especially, is increased, and even the senses of taste and smell become often unusually discriminating. Sometimes, but not always, the breathing is relieved; the oppression

indeed is, on the contrary, often materially augmented: the headach, which I neglected to notice in the cold fit, is aggravated, and delirium comes on, with great increase, if that be possible, of the thirst; and the urine, which had been abundant and limpid, diminishes and becomes high coloured. Sometimes the nausea goes off, but that is not invariable; while even vomiting sometimes happens, and the occasional occurrence of hemorrhages, commonly slight, completes this catalogue. With the sweat, which follows, the pulse abates, the urine deposits a red sediment, the patient generally falls asleep, and the paroxysm terminates, leaving behind it debility varying in degree according to the character of the disease. I need only add, that according to some authors, there is in the sweat, a peculiar indescribable odour, which I do not however profess to have discerned; and that according to Strack, this is so remarkable, as even to form a criterion of the disorder in those obscure and anomalous cases which might otherwise, from the prevalence of peculiar symptoms, be confounded with some other original disease.

Such is a perfect or abstract picture of the intermittent paroxysm, cleared also from every occasional or supernumerary symptom which be-

longs to peculiar epidemics, or peculiar varieties, such as, those which are accompanied by inflammations of various kinds, by extreme affections of the liver or the brain, by what are called malignant symptoms, such as are petechiæ, by peculiar nervous affections, or by those several appearances or additional diseases which I have described under the head of anomalous intermittent. Among these, it must especially not be forgotten, though I have not thought it here necessary to treat of those severe kinds, preferring a reference to authors, as I have done in the case of remittent of similar characters, that among the malignant epidemics, pure intermittents, even tertian or quartan, are not uncommon, though unknown to our own climate; and that, like the remitting or continuous or marsh fever, these kinds occur in autumn. I urge this, that I may not be supposed to have forgotten what I do not think it necessary to describe; having here limited myself to what alone I have seen and to what England sees alone. When a tertian is fatal in the second or third paroxysm, it is evidently a disorder with which, at least as an epidemic, we are unacquainted: and with respect to the treatment as to the history of such epidemics, there is, as in the case

of remittent, no want of accurate and valuable information.

But independently of this, and while with us also, the intermittent paroxysm is rarely so extreme as I have here represented it, there are numerous variations in its course and character, of which I must notice a few among the most conspicuous, even now: though such irregularities must come under review in the account of the chronic and anomalous varieties, where they are much more frequent and more necessary to be known.

Thus, the cold stage, or the hot, or the sweating one, may be absent, as may any two of them; or the hot stage may appear before the cold one, or there may be repeated alternations of heat and cold, as in remittent, or, not to enter into further minutiae, the whole may be a scene of confusion. In some rare cases, the entire fever, or any portion of it, is partial; or, one part of the body, even to a limb, may undergo a regular or an irregular paroxysm.

In quotidian, resembling remittent as it does in so many points, the cold stage is shortest; and, reversely, it is longest in quartan; but the entire paroxysm is longest in the first, and

shortest in the last; tertian, in both respects, holding an intermediate course. It is a general observation among authors, that the attacks of intermitting fevers are, in the proportion of nine to ten, more frequent in the day than in the night, and that the period from eight to eight will generally be found to comprise all those which last less than thirteen hours. The remark is, I believe, sufficiently true as to acute or recent fevers of this nature: but it is far less so as relates to the chronic or relapsing ones, and, as I have here remarked in another place, is not an unfrequent accessary cause of errors, often of no small moment.

With respect to the duration of a paroxysm, should it occupy the whole twenty-four hours, or should the intermission be ill marked, it becomes a remittent; in which case also, as in all quotidian or diurnal intermittents, the cold fit bears a small proportion to the other parts of the paroxysm. A perfect intermission constitutes it a quotidian; and this variety therefore consists in one diurnal paroxysm with one complete interval of health, or of freedom from actual fever. Such is the simplest type of intermittent; a quotidian ague; while in the variety of the times of recurrence, we find the other types of this disease.

There can be no reason to doubt that intermittent and remittent are but modifications of one disease, and equally, that the same poison produces both, even in the same individual spot, modified perhaps in quality, or else acting differently in consequence of differences in the quantity. It is a mild fever or a severe fever: mild when vegetation and putrefaction are least active, as in spring, and severe when the reverse occurs after the heats of summer. And thus it sometimes happens, that while, on certain occasions, the spring disorders entirely disappear, leaving the solstice free of disease, when the autumnal ones succeed, in other cases, according to circumstances in the season, there is no interruption; while it has even happened in England, as I once before remarked, that the remittent has appeared in spring and proceeded throughout the whole summer. I speak here of our own country; because in the hotter climates, original and vernal intermittent is comparatively little known; the epidemics, even from their commencement, being of the remittent character.

Thus, and for obvious reasons, it is also a general rule, that the vernal diseases, being intermittents or otherwise, are more inflammatory; while the fevers of autumn are more generally

malignant, or have the characters attending debility, together also with a greater predominance of bilious affections. And if we proceed along the season in the same manner, we shall find that while remittents continue in their proper form during the hot weather, they begin to intermit, even in hot climates, on the setting in of the cold. A natural conclusion which follows this, is, that be the power or effect of Malaria what it may, or however its production may be regulated by the state of temperature and the corresponding conditions of vegetation, there is, in the mere action itself of heat on the body, an accessory cause which is of considerable effect in determining the form and character of marsh fever. The well-known rarity of simple and original intermittents near the equator, must therefore be supposed to depend on these different circumstances combined. That, of the different types, quotidian and tertian are the general intermittents of spring, and quartans those of autumn, is a remark as old as physic itself.

If it is a rarer case, it also occurs that two distinct paroxysms take place in one period of twenty-four hours, constituting a double quotidian; while if, with respect to this variety, it sometimes happens that one paroxysm belongs to the night

and the other to the day, there is a similar tendency to that which I just remarked of intermittents in general, namely, to bring as much of the both fevers as possible within the hours of day. When the paroxysm occurs but once in the period of forty-eight hours, the type is tertian, while the same occurrence in seventy-two hours produces quartan; beyond which it does not appear that any regular single type has been often found, though, as I shall presently show, such peculiar cases do occasionally happen. In the tertian, obviously, one period of twenty-four hours is free from disease; while, in fact, there is generally much more, as the paroxysm scarcely ever occupies its own twenty-four; and thus the quartan also leaves two days of health. Hence it is, that if these types, and the latter in particular, are the most durable, or tend most commonly to the chronic state, they are the least inconvenient, as they do not entirely disable the patient. Hence it is, that in so many parts of France and Italy, the business of life is conducted, and in some places almost solely, by a population of which the far greater number, and sometimes the whole, are labouring, and even through life, under these chronic agues.

Particular cases of types extending beyond

these, are, as I have just noticed, to be found in authors ; but, as rare instances, they are objects of curiosity rather than of use. The most unexpected one that has occurred to myself was one of a quotidian attack, recurring three successive days, but interrupted by intervals of six weeks, and thus lasting for some years ; and from this case, it will be easy to conjecture how many strange modifications of intermittent may exist.

Boerhaave, Van Swieten, and others besides Galen long ago, describe a quintan type ; while some speak even of regular recurrences as distant as the fifteenth day. In some authors, we find accounts of intermittents occurring once a month, once in two months, and so on ; while, where others speak of annual types, it is abundantly plain that this is a mere perversion of terms. For such histories, De Haen, Sauvages, the authors named above, and many more, may be consulted ; while their *Erraticæ* are the chronic and irregular diseases which I have here noticed very fully. As to the endless terms by which the older authors have distinguished varieties in these fevers, such as *amphimerina*, *epialis*, *syncopalis*, *hemitritæus*, *subintrans*, and so forth, they are as useless as they are

idle refinements or superfluous and trifling distinctions: but he who, following Sydenham, may feel any affection for them, may easily store himself out of Sauvages. Of the distinctions grounded on anomalies, however, I must speak with respect; because they are of considerable value in calling the attention to the obscure and simulating cases; and I have here accordingly noticed them wherever that appeared to be proper. As to the quotidian type, I should add in this place, though compelled to notice it when speaking of remittent, that its existence has been denied by some authors. It is probably true, that, in the hotter climates, quotidian, perfectly distinguishable from remittent, is rare; and we must conceive that the authors of this opinion have drawn their conclusions from such countries, since the existence of well-marked quotidian in our own can admit of no doubt. Otherwise, it may be a mere dispute of terms; some physicians considering as a highly-marked remittent what others would call a quotidian.

But there are fevers also of double type, which, coming under some general law, however obscure that may be, are more deserving of notice than the protracted one just named. The most common and the best marked of these, is the double

tertian ; the existence of which can admit of no dispute ; while I shall soon show that it is one of those types frequently connected with the local diseases, confirming the views respecting these which I have held out. If this type may sometimes be confounded with quotidian, as it also is at times so little distinguishable, when chronic, from remittent, that I have hesitated about the proper place of many of these diseases, the distinction may commonly be made, with due attention. Either the two consecutive fits do not recur at the same hour, or they differ in strength, or in duration, or the several parts of the paroxysm are differently apportioned, or a particular symptom attends the one which does not accompany the other. If I have read of combinations of tertian and quartan, of triple quartans, and of others that may be imagined, I have no experience in them, and shall, as formerly, for their descriptions, prefer a reference to the authors by whom they are described ; as they do not appear to throw any useful light on the nature of these singular diseases. It may be an object of curiosity however barely to notice some of these : but the warranty for such types must rest with those by whom they have been observed, and it is indeed probable, that in our own country, at the present

day, it would not be very easy to produce many examples deviating from the more ordinary forms.

The ordinary double tertian, as I have seen it, is marked by a daily paroxysm; but with the characters, on any two succeeding days, so different, as to convey the impression that there are present two distinct tertian fevers, the one of which had originally commenced on a given day and the other on the succeeding one. But in the other variety, two paroxysms occur on one day, and there is an intermediate one free from disorder. In that which has been called a triple tertian, there are two paroxysms on one day and one on the intermediate; as if three distinct fevers had been brought within the space of two days. In the double quartan, as in the double tertian, there are also two varieties noticed. In the first, two paroxysms occur on one day, to be reckoned the first, leaving two intermediate days free, and the fourth day containing also two paroxysms: while, in the second, there is a paroxysm on the first, on the second, and on the fourth day; the third being a day of repose. The triple quartan is described as having, in its first variety, three paroxysms on the first and three on the fourth day; only; and, in its second, a paroxysm on every day, so arranged, that the

first and fourth, commencing from any one of the three days, always correspond in character.

If, in speaking of the chronic remittent, I have placed under that disease, many febrile disorders or states which have hitherto not been so explained, and at the hazard, as I conjecture, of no small criticism and opposition, I am not yet courageous enough to state my own conviction that intermittent fever may consist but of one paroxysm, finding also its own natural termination after one attack ; and consequently, that the fever called ephemera is, in reality, often a single intermittent. Yet such is the decision of Strack, whose experience in this disorder seems to have been equalled by his attention to it, and who is not to be lightly doubted. And from his observation, this is the disease which terminates in an eruption on the lips ; while the reason for believing that this view is a correct one, is, that in the intermittent, such an eruption does terminate the disease after any number of paroxysms, and that the returns are often perfectly regular. It is always difficult to be certain that we can safely refer to Hippocrates for support, such is his brevity, and too often his obscurity : but if his testimony as to an intermittent fever which terminates by ulcerations of the lips is here applicable,

the authority may add to the weight of the evidence on this point.

It remains to notice what is called anticipation and postponement, and also change of type, as parts of the necessary history of intermittent.

In the anticipation of paroxysms, the hour of attack becomes earlier, as in the postponement it becomes later; the former being generally esteemed to mark the aggravation, and the other the diminution of the disease. These states, however, belong principally to the terminable or limited intermittents; as, in the chronic ones, the periods are generally remarkably constant, even for a long course of years. And from an analogous procedure, as remittents terminate in quotidian intermittents, so do these latter sometimes settle into tertians. And further if tertians change into quartans, or even into more complicated types, such as the triple quartan, so do they reversely, become quotidians, and even remittents; while I must observe that changes in this direction, being the approximation or aggravation of paroxysms, are the very general proofs of a severe and dangerous disease, occurring chiefly in bad seasons and climates.

It is an old notion that vernal agues at least are salutary, nor is it by any means out of date

among the common people in our own country. That they purify the blood, remove chronic diseases, and lead to old age, was even the opinion of Boerhaave, as it was not less entertained by the noted physicians of our own island, whose names have at length become great names in physic. It cannot be very easy to discover how an opinion like this should have found such supporters: except that where an intermittent may have appeared to remove a chronic disease, it has, not improbably, been one of those cases hereafter pointed out, where a simulating one had become simple and regular.

I must also add here a remark on one effect of intermittents for which I could not conveniently find another place, while it is also connected with the opinions in question, inasmuch as it has not improbably given rise to them. It is the tendency which they often produce in patients to become fat, as is well known in Flanders especially, it is said. This happens after acute cases or single attacks; even when there is no suspicion of organic disease: nor indeed is the obesity confined to the omentum, or abdomen; the whole person enlarging, and often with surprising rapidity. And what is remarkable, this occurs also in the most obstinate chronic cases, and even when the

presence of diseased spleen is proved ; while even the daily occurrence of fits does not check that tendency, unless the febrile state should be very strongly marked. And in such cases also, it will frequently happen that while a period of unusual severity, or a new relapse, produces emaciation, the patient recovers his usual superfluous bulk, within a week or two, even though the chronic and slighter disease is going on. Whatever be the explanation, it is a fact from which we might perhaps argue that the constitution suffers little serious injury from the disease, though in all such instances the loss of muscular power is generally very considerable. How often emaciation, on the other hand, is produced in such cases as are every where seen in the unhealthy districts of France and Italy, where serious organic disease is present, it would be superfluous to say. And though I formerly remarked, from French authority, that such obesity was not of a healthy or firm nature, while it is even asserted that a portion of this unnatural bulk consists of water, it does not by any means appear that this is the opinion in Flanders and Holland.

It is unnecessary to detail further the history of intermittents in their most simple, marked, and ordinary form ; and I must now therefore

describe the chronic state ; not merely because of its own intrinsic importance as a frequent cause of great suffering, but because it is under this mode that the greater number of the anomalous and simulating cases occur.

Any type of intermittent may become chronic, and any type may also become durable ; though it is a general observation that the quartan is the most enduring, and that it also is the one which proceeds longest with the least interruption. It is not rare that a quartan should last even to twenty years, or through life, be that what it may. I know not, comparatively, what may be the duration of the other types, as it would be an almost impracticable labour to extract it from the records of cases ; but it seems ascertained that after the quartan, the tertian is, of the simple types, that which lasts the longest.

If any type may thus become chronic or durable, I must also remind the reader of the resemblance between the chronic or repeating remittent and the intermittents of a quotidian and double tertian type. I do not know, at the same time, how far the quartan may be interrupted by long intervals of health, or absence of fever ; as our experience in this country respecting that type is very limited, and as it is not easy to dis-

cover the exact truth from the writings of authors. But in the other types, while the disease is still chronic, it is often interrupted ; or there are successions of distinct intermittents of the same character, separated by intervals more or less durable of health, as happens in the chronic or repeating remittent.

Such is a general view of the character of this set of diseases ; while, with respect to the progress, though the general type, and even the hours of recurrence may remain the same, during years, and at whatever distance of return or length of interval, it will frequently happen that the strength or energy of the separate returns vary, or that the local symptoms which existed in one recurrence, may be absent in another. And thus also, when the disease finally disappears, it is generally in consequence of, or in sequence to, a gradual diminution of the energy or length of the successive recurrences.

Further, with respect to such recurrences, and chiefly in the most ancient or enduring cases, there is often a great irregularity in the lengths or energy of these. Any one may be severe, and may be protracted even for months ; while a subsequent, or perhaps the next one, may not extend beyond a few days, or even one fit, or may be so

slight as scarcely to be discoverable by any one but the patient himself, whose attention habit has sharpened as to this subject. And thus, further, it may happen that the possessors of a chronic ague have arrived at such a state, that no traces of the disease remain but a susceptibility of recurrence on slight causes, while the paroxysms thus produced almost terminate with the exciting circumstances. And here also we see distinctly the necessity of avoiding them; above all, the caution requisite respecting Malaria, and the advantage of studying carefully all those circumstances under which that may be generated or conveyed. As in quartan, the length of time through which this state may last seems indefinite; and where the patient continues exposed to the great exciting cause, or to reside in a land of Malaria, any one of them may be the inheritance of life; such as life is, in those cases and those countries.

Still, it is necessary to state on the other hand, that in some countries, as in French Flanders for example, it is remarked that while these fevers terminate of themselves, with the season that produced them, recurring however again in the same seasons, perhaps for two or three years, it is not uncommon, for children particularly, to

become seasoned to the climate as it were, and to suffer no further, unless however they are re-exposed to the more active exciting causes. And thus also in other cases and countries, just as happens in the remittent, do persons become seasoned to intermittent, as it is commonly considered; or, after recovery from a severe attack, they become unsusceptible of fresh ones, or of attacks of similar severity. This is the very singular history of West Indian fevers, in the division of remittents, as formerly discussed; while what was there said applies in a great measure to the case now under examination. In the pernicious districts of Italy, Sicily, and France, it is also not unfrequent for the people to become, as it were, callous to intermittent, or at least to severe attacks or severe renewals, though the existence of the disorder in a chronic state may still be often traced; while, as far as we can judge from that mass of reports for which we must trust to some bad observers as well as to the better ones, this effect appears to predominate where the glandular diseases have been produced. It would seem therefore from this fact, and from what I formerly stated respecting the production of glandular diseases in India as a substitute for fevers, that such disorders may often be the cure

or prevention of remittent and intermittent both, such as that cure is, instead of being the maintaining cause that has very commonly been imagined. And that there are individuals who seem, from constitution, almost unsusceptible of the effects of Malaria, is a fact already noticed in treating of remittent.

Whatever else I might have said respecting this mode of the diseases in question, will be more conveniently deferred to the next chapter, since it is peculiarly entangled with the subject there treated; and I must now therefore proceed to describe the varieties of intermittent which differ from the well marked and more regular diseases of this nature; following the course which I have pursued as to remittent. I might, with some affectation of refinement, divide these, throughout, into such terminable or acute cases as are of an imperfect or anomalous character, and into those which are limited to the chronic or persistent forms of intermittent; but so entangled are all these matters, that it could not be done without producing repetitions which would be but ill atoned for by such an attempt. It will be more convenient and brief, in noticing these anomalous cases, to mark occasionally, in proceeding, under which of these two divisions they

occur ; while the far larger number will be found to belong to the chronic or habitual diseases. I also think it here superfluous to recur to the subject of the types, since that also would be to prolong this account to little purpose : it being sufficient to remark generally, that the anomalous fevers, like the simpler chronic disease, may appear under any type. I may here also premise further, that as many of the remarks formerly made on the chronic remittent apply equally to the chronic forms of quotidian and double tertian, while, as I then also observed, different persons may choose to view this disease under these different terms, I may often be compelled into what may appear repetition, though studying to avoid it wherever I can satisfactorily refer the reader to what was then said. And lastly, when I am compelled to notice the occurrence of local diseases in these cases, I must often refer to the last division of this essay, where I have been obliged to treat of them in one mass, for the reasons formerly assigned. Hereafter, should physicians become satisfied that the views which I have held out respecting these disorders are correct, it will become easy to remodel the whole history of the diseases of Malaria ; but to have done this now, under evidence which may be deemed by

many unsatisfactory or imperfect, would be to prejudge in some measure an important question, and to incur the charge of premature generalization and love of system. I must submit to the opposite charge of repetition and tediousness, that I may avoid this one; being placed between Charybdis and Scylla: and thus leave to some future observer the credit of doing what I might myself have easily done, had I thought it justifiable in the present stage of this question.

CHAPTER VII.

*On the anomalous, obscure, and simulating
Intermittents.*

IN the very slender sketch which I gave of the well-marked and severe, or of the ordinary remittent, being as unable to avoid some notice of that form of fever, from its fundamental character and connexion with all these diseases, as I was, reversely, unwilling to repeat what has so often been written, I purposely avoided noticing those cases or epidemics where very marked local inflammations of different organs accompany it and modify its character; often indeed to such a degree in relation to the practice, as to render the mere fever of comparatively little moment. I reserved that notice for this place; that I might, by means of that general fact, the better illustrate the anomalous, localized, or simulating intermittents, the knowledge and discrimination of which, and perhaps most of all in their slighter forms, appear to me so essential.

Let me therefore now remark, that in remittent fever, there may be present, inflammations of

the brain, of the lungs or the pleura, of the throat, (anginæ of different characters,) of the bronchial membrane (catarrhs,) of the stomach, the intestines, the liver, the spleen, the peritonæum, perhaps of other internal organs or viscera, and also of the muscles and ligaments (rheumatisms): all of these varying in their intensities, in whole epidemics as in individuals, and thus, at one extreme, producing cases, which, under peculiar characters also in the essential fever, may simulate, or almost equal, cases of phrenitis, pleurisy, and so forth; calling for material variations in the practice, and not unfrequently becoming the grounds of most inconvenient disputes among physicians not sufficiently aware of the nature of what they had not witnessed; as also of recommendations as to the treatment, not less easily misapplied, and frequently highly pernicious in their results.

Now if these local affections occur in remittents, or, as must equally happen, in marsh fevers of a continuous character, sometimes even leading to error as to the fundamental nature and cause of the disease, or passing for pure inflammatory diseases whenever the physician is unaware of the nature of the epidemic, or when its true character has not yet betrayed itself, so they

occur also in the severer intermittents, as might, without much effort of thought, be expected. In these cases perhaps, the varieties are not only greater, but error is even more easy. The inflammatory, or local affections, be they what they may, may be slender and truly supplementary ; but they may also prevail so far above the fever, as in remittent, that they may appear to be a distinct disease, or the superior one ; while if, further, the local affection should be permanent or continuous, when the fever has its intermissions, and perhaps long ones, as in quartan, and while, still further, that fever may not be very conspicuous compared to the local symptoms, it is easy to see that erroneous views and erroneous practice may follow.

That, as to intermittent no less than remittent, the occurrences, or varieties, which I have thus indicated do exist, ought practically to be known to every one who has had any intimacy with those fevers ; although, that they are but little known or suspected in England, is a fact which I believe I may with safety assert. But those who are thus situated, may convince themselves by consulting numerous, but almost solely foreign authors ; while as one convenient reference at least for these cases, I may point out the nosology of Sauvages

where such intermittents have even been distinguished as distinct varieties, as far at least as this laborious writer was enabled to produce authority. I am aware that he has been both censured and ridiculed for erecting these varieties, as if it were an unnecessary and trifling refinement: but so far from joining in remarks which must have proceeded from those who were unacquainted with this subject, or whom I must consider as uninformed or inattentive practitioners, I look upon these distinctions as of great practical value, by directing attention to varieties, an ignorance respecting which I shall shortly show to have been a fertile source of the greatest practical errors.

Though I have thus referred only to the inflammatory local affections, as the most conspicuous, in deducing this resemblance between the varieties of remittent and intermittent, the same analogy holds as to other variations or combinations; among which the nervous diseases, to use a popular term, form the great mass: or, as there is a pleuritic remittent and a pleuritic intermittent, so apoplexy or palsy may be united in different modes to either mode of marsh fever. Such diseases, or such varieties of intermittent will here be enumerated as far as they are known

to myself, and also where, having never met with them, I can borrow from valid authorities ; but I must now state, generally, the reasons why I have made of this subject so extensive and detailed a chapter, and how far what I have described differs from what will be found in authors on intermittent fevers.

I had long ago been led to seek for the chronic and obscure forms of intermittent, or remittent, (for a distinction is scarcely necessary) because I perceived that they were very generally overlooked, and because I found that I could thus, not only explain, but cure disorders which had been considered mysterious or inexplicable : a proceeding, of which the evidence appears in many parts of this essay. In this pursuit I soon and necessarily perceived, that if many of these cases were surrendered as inexplicable, in many others the prevalence of some peculiar and marked symptom gave rise to error, as well in practice as in opinions, and often of a very serious nature : that symptom receiving the name of the original disease to which it most commonly appertained, or which, in some cases, it formed, and the adopted practice following, of course, the usual routine recommended for such diseases.

If, in the course of these observations, I recol-

lected in authors, single cases which seemed to confirm my own conclusions, I did not recollect that any general doctrine of this nature had been promulgated, and assuredly it had not been taught in the medical schools; while the more I watched the general practice of others, the more I was convinced that it was either a neglected or an unknown subject. Considering it therefore as of great importance, and the neglect as not less so, I resolved to generalize the facts as far as I could, and to allot for it a distinct and formal chapter; dwelling on it also with a detail which I should certainly not have adopted in any case of known disorders, because thus hoping to make the greater impression.

In how far I was justified in thinking that medical writers in general, and the authors on intermittent especially, had not formed any definite opinions on these anomalous and simulating intermittents, will appear hereafter, when I shall have occasion to quote their detached cases; when I shall then also show, that my own observations could not have been biassed by what I had not then read. But I must remark here, that while I had at one time supposed that this was not a new question, however much I might have thought so from observing how little it seemed

to be known by our present practitioners, and how little, even the most recent authors on such a disease as palsy for example, seemed to be aware of it, forming this passing opinion from an inspection of nosological tables and indexes, a further examination proved that I was here in error, and that my original conclusion, namely, that it was a neglected subject, was the true one.

That examination taught me, that with few exceptions, which I shall notice in their proper places, the anomalies or peculiar diseases appearing under marsh fever, which authors had described, related to acute and violent diseases, intermitting as well as remitting; and that, as a sort of general neglect, as if by a kind of universal consent, had reigned respecting pure chronic intermittent, so, very particularly, it was scarcely any where indicated, that disorders apparently original might be united to chronic as to acute marsh fever, and still less that these might be so constituted as to deceive the physician, from the obscure, irregular, or nearly insensible state of the proper fever. In some authors I did indeed find indications and cases of this nature, as I shall hereafter point out; marking principally Strack, as the chief collector of facts, but even then, not being able to perceive that he had

formed any general views on the subject, and the more convinced of this from finding that later systematic writers, such as Philip, had not, in their otherwise praise-worthy books, appeared to derive from him, while largely referring to his authority, the conclusions which I had been led to adopt from my own observations.

Thus much I thought it necessary to say in defence of the space which I have occupied in this chapter, and in defence of my thus making a separate chapter of what has been treated not merely with neglect, but, as I have elsewhere said, with ridicule: and I have only to add therefore, that while I consider the chronic, anomalous, and simulating cases as even more deserving of discussion than the acute ones, inasmuch as they are less suspected and more frequent causes of error, so whenever, with little exception, I refer to a title in Sauvages, it must be remembered that his examples do not exactly tally, inasmuch as they are very generally instances of the acute and not of the chronic diseases.

Lastly, thus strongly to distinguish between acute and chronic forms of one disease, and thus to dwell on the latter rather than the former, may in reality not be very consonant to the usages of medicine, or even of science; but the

justification must be sought in the causes I have already stated, while it must be remembered that if it was fruitless to dwell on what was already well known, the object of this essay is Utility. If I succeed in attaining this end, I shall little lament any censure that may follow as to other matters.

I would willingly have adopted a more formal order for what is about to follow, as I would willingly have treated of many of the varieties which I have noticed, in more detail. But I have imagined that arrangement which best illustrated the matters described, to be better than one which should have no other merit but its regularity; and as to the other point, it has been a leading object to keep these discussions within as small a compass as possible, lest an inconvenient bulk should become the consequence. I shall now commence with the affections in which the nervous system is chiefly or ostensibly implicated.

I formerly noticed the apoplectic state which sometimes commenced the attack of intermittent as well as of remittent; but it is necessary to recur to it here, on account of its great importance as connected with the practice in these disorders, and because of other analogous symptoms sometimes occurring. This state is not limited, either

to the first attack or to the acuter forms of these fevers, although in Italy that appears to be the most common mode of its occurrence; as I have seen, in this country, a perfect apoplexy, to the eye, in all its characters, sufficient to deceive both the attending practitioner and the friends, lasting for eight hours, and occurring in a chronic tertian of many years standing, as a substitute for the cold fit.

The danger of error as to the nature of such an attack is, in practice, very great, as I shall hereafter more fully show; since the effect of bloodletting, so commonly resorted to by practitioners under such symptoms, be the cause what it may, is often to induce palsy, sometimes death, and, in any case, to produce additional bad symptoms, often of a very serious nature. In many instances, I have seen local and limited paralytic affections produced by this mistaken practice, and in more than one, a perfect and incurable hemiplegia; while I have reason to think that this has happened very often in Italy, in the hands, however, chiefly, of English practitioners unacquainted with this anomalous variety; though I also know that it has been the result of Italian practice, notwithstanding the much juster views generally entertained in that country respecting

these "*febbri larvati*." It will be for English practitioners in our own country, and chiefly for those who live in the agueish districts, to inquire whether they have not committed similar errors; while there is reason to suspect that they are not very uncommon, or rather, extremely frequent.

A modified condition of this nature, is the lethargic or comatose state, which occurs in the chronic intermittents as well as in the remittent of that character, and which also sometimes ushers in the first attack of an intermittent, in the same manner as the more perfect apoplexy does. It is incumbent on the practitioner to investigate this symptom or condition where it occurs, much more accurately than it is the custom to do; while it is abundantly easy to discover whether it belongs to this disease or not. To view it as an independent disorder, and as arising, according to the popular and fashionable error, from what is called a flow of blood to the head, is a most unpardonable mistake, from its leading similarly to injurious practice; to bloodletting and to cupping: the consequences of which also are, sometimes, paralytic affections, at others, slight epileptic ones, or even more decided fits of that disease; in others again, a modified fatuity, or a diminution of the intellectual powers, or a con-

dition little short of absolute idiotism : and, even, in the least evil event, a long train of debility and nervous symptoms, with the further frequent consequence, as in the former case, of rendering chronic a disease which would otherwise have terminated by itself, or of protracting much longer and more severely, a disorder already chronic. It is one of the cases, and one of the modes of practice, yet but one out of many, which so often causes medical interference to aggravate the diseases of this nature. I shall only further remark, that this error is most generally committed, as I have seen in numerous instances, and as perhaps might have been anticipated, when the patient is corpulent, or of a certain form, or advanced in life, or when suspected of indulgence in eating and drinking : when it will be fortunate if he escapes bloodletting or cupping, to be simply deprived of the use of wine, or restricted in diet ; though even practice of this moderate nature is not always without its bad effects.

As connected with these I may proceed to the palsies or paralytic affections which sometimes occur in this disorder ; forming an anomaly, if I may so call it ; and sometimes, as in other analogous cases, when so marked in comparison to the febrile condition as to appear the sole or real,

or the chief disease, producing a simulating disorder, it may be, even to an attentive physician, unless aware of this particular fact; while, as far as I can discover from all the reading on this subject in which I have engaged, or from observation of the opinions and practice of England, this knowledge is rare, or perhaps scarcely exists. At least I have not myself found any practitioners who seem to know that palsy is the frequent produce of Malaria, or the substitute for intermittent fever, or a symptom in that disorder; while it is plain that if this be a common case, at least, among the well educated, if not a general one, there must occur, in practice, to persons of a different class, many cases of this nature, where the paralytic disease is even attendant on a very distinguishable or marked fever, and where nevertheless that would be overlooked, from the attention of such practitioners being absorbed by the ostensible symptom. I need only add, as a prefatory remark to this particular subject, that paralytic affections of this nature, or appertaining to this cause and connexion, occur also in the local intermittent disorders ranked under Neuralgia, so that they must inevitably come under review again: but I could not, in any view, avoid treating of them here, and very particularly on ac-

count of their connexion with the apoplectic affections just discussed.

Apparently as a substitute for, or modification of, apoplexy or coma, however obscure the exact cause may be in either case, the first attack of an intermittent is sometimes a numbness, or a more perfect paralysis, varying in its extent as well as its severity, so as to affect only a few muscles, in different parts, or else to produce an absolute hemiplegia; which, however, may also be slight as well as complete, or may consist in a numbness or loss of feeling to that extent, without depriving the patient of his command over the muscles. Should the truth of such a cause for palsy be denied on the ground that we cannot explain its action, it must be recollected that it is no more a mystery than the production of apoplexy in the same cases; while the possibility is confirmed by the numerous instances of the same nature which occur, limited to single, and sometimes very small nerves, and either original, or succeeding to painful conditions of those. Every thing indeed tends to show, that if the diseases produced by Malaria are not, purely, and all, mere affections of the nervous system, the principal action of this poison is on that system, and the greater proportion of the disorders which are caused by it, dis-

orders of the nerves. Whether the paraplegia so often occurring from exposure to cold, and especially among soldiers in bivouacs, is sometimes, or ever, a disorder of this nature, is a question that I cannot answer from such evidence as I have been able to procure, however this may be suspected in some cases.

If these paralytic affections sometimes usher in a new intermittent disease, being, like the coma, a sort of substitute for the cold fit, so have I seen them occur in the chronic state, and, in both, under circumstances that could admit of no dispute as to their real nature. A single fact, out of many similar, will serve to explain the grounds of this judgment. This is, that in a situation exposed to Malaria, and never free from its diseases, where in fact scarcely any one ever escaped it, while the other members of a large family had the intermittent under different, but ordinary, forms, two were attacked with paralytic affections, suddenly; the one in the leg and thigh, the other in the arm. Being the younger members of the family, and though it was the first time that any case of this nature had come under my notice, I viewed these palsies as modes of the apoplexy of intermittent; and the judgment was confirmed by the almost spontaneous disappear-

ance of the disease in both, and the immediate establishment of the regular quotidian. In the chronic cases, there ought never to be any doubt, because the preceding intermittent explains the cause; though the most serious errors may be frequently found in practice, even in cases of this more obvious nature.

The practical error in the case of such paralytic affections, is the same as that in the former two conditions; the imagining a "flow of blood to the head," and a palsy to be treated by bleeding and evacnants; and the result very often is, perhaps in severe attacks always, to confirm as a perpetual palsy, that which would have passed away of itself, had there been no interference, or which would have been removed by the common remedies for intermittent. If there are many other cases of palsy occurring in practice, which might otherwise have been temporary, whether arising from the effects of cold or not, and which have been rendered incurable by this pernicious and common treatment, I have little doubt that innumerable ones will be found, by those who have the means of making the inquiry, where this result has been the consequence of such evacuations applied in the palsy of the intermittent.

Of such cases I might have stated a great

number from my own observation ; respecting which, while I entertained no doubt, even on the first inspection, the confirmation was rendered complete by the previous history of the patient, by his diseases, his residence, and his treatment. But to relate those, is to subject myself to the suspicion of having viewed them under an hypothesis of my own ; for which reason I will here describe one or two not under my own care, because, while I suspect the nature of them to be that which I have stated, I shall leave the decision to others ; taking from the reports of the physicians engaged, what I had not the means of examining personally, but taking only the naked facts, as the medical attendants had formed no opinions respecting the cause. In the consequences, they coincide exactly with what I have seen where I could pronounce on that cause. As to the utility of such cases, it is that they will serve the purpose of directing the recollections of practitioners to what they may have seen under similar errors ; while a very wide range of observation, prolonged during thirty years, convinces me that this species of error is not only common, but almost universal.

In the first case, two sisters, in one family, about the age of thirty, were strongly marked

with that complexion and physiognomy so well known as attendant on diseased spleen, and were subject to those strange symptoms, of various kinds, which occur in the chronic intermittents, already described for the most part. It had also happened that they had passed a large portion of their lives in one of the most pernicious districts in England; but whether they had suffered from acute intermittent, I was not informed. The occurrence of what are, very indefinitely, called spasms, led to bleeding in both cases; and this, producing more nervous symptoms, was followed by more bleeding and more cupping. The result, in one of these patients, was hemiplegia, and in the other, paraplegia; and further bleeding being also resorted to for these disorders, both of them died.

For the other case, I must borrow from a medical friend; glad of facts from those who have not the bias of which I may be suspected. It was that of an officer, in whom it could however only be conjectured that intermittent was the original disease; but it will serve at least to illustrate the effects of bloodletting in such cases, by, I believe I may say, whatever cause produced. An inexplicable palsy of one limb was here the first occurrence, and in a man of a constitution and time of

life where the usual vulgar cause could not be suspected. Bloodletting was followed by palsy of the other leg ; and on repeating it successively, both arms, one after the other, became similarly affected, so that the patient at length became and remained almost an immoveable carcase. It is not known to my reporter how this case terminated : and if it is not absolutely proved to be an instance of this nature, it coincides so exactly with those which I have seen where the same practice produced similar effects, that I entertain little doubt of its having been the palsy of intermittent.

To confirm at least the possibility of so universal a palsy, and arising from Malaria, I may quote a case related by Keratry, occurring in that poisonous district in France, Ile et Vilaine ; where, while the internal functions were carried on, the patient was for many years so utterly paralytic, that nothing but one side of the face was capable of voluntary motion ; though, as the treatment is not related, no suspicion appearing to have existed in France more than elsewhere, of such effects being produced by bleeding, it can only be conjectured that this practice had at least aggravated that effect of the previous disease, or that a partial palsy had, as in the preceding case,

been rendered universal by, probably, repeated bloodletting. That an universal palsy is also possible, is confirmed by Etmuller; while here at least there is no difficulty in tracing the disease to an intermittent. It succeeded to a tertian which had lasted during a year, and was accompanied by nocturnal sweatings, pains in the hands and feet, and a livid countenance: while, with an ignorance which appears somewhat surprising, it was attributed to scurvy, and called scorbutica; apparently from the colour of the face: there being little doubt, from this, of the presence of a diseased spleen, while it is by no means unlikely that the palsy had been the consequence of an evacuant practice.

The following case is of a similar nature, inas-much as it serves to prove the pernicious effects of this practice; while it illustrates that, perhaps even more strongly, in consequence of the gradual cure, aided probably by change of air, which followed its suspension. It is also an explicit one, though but one out of many, since it elucidates the connexion, equally, between apoplexy and palsy, and intermittent: while valuable in another sense, as showing how easily the palsy succeeding to the apoplexy in this disorder, whether from mal-practice or otherwise, may be

mistaken for that disease depending on original apoplexy. In this example, an officer, a young man, who had suffered from the remittent fever in Spain, was suddenly seized on an English parade with a fit, or what is commonly called such, which was considered as apoplexy; being in reality a return of his intermittent. Being placed under the usual discipline, he was rendered partially paralytic, and at length, under two years of the general routine, became the mere shadow of a man, while previously most robust; losing also, with his strength, the better part of his intellect. Determined at length to join his regiment in the West Indies, he embarked in a transport, where, from there being no surgeon, all medical practices were suspended; from which moment he began to recover, and concluding just what I have here concluded, was in a few months restored to perfect health.

With respect to this consequence of intermittent, or of marsh fever generally, and very particularly of the effects of the evacuant system in producing it where it would not have occurred, or of aggravating it where it is existing, I have reason to be surprised that it appears to have made little impression in Italy and France, compared to what might have been expected; that judgment

being formed from at least different and numerous works which I have read on this subject, if I have not read every thing. That Keratry was unaware of it, and that his reporter, Monfalcon, offers no commentary of the same nature, appears to me a sufficient proof of the truth of this suspicion; namely that although the general fact is known and admitted, due value has not been placed on it, and very particularly, as it does not seem to have been observed that such as I have noticed is the result of bloodletting. Were not my own experience ample and satisfactory on this point, this would have rendered me doubtful of my own conclusions; but that has been far too wide and precise to permit me to surrender my own judgment, even to authority and experience such as I have named. And if I have received, from Italy, English patients, rendered paralytic under Italian practice, in these very circumstances, and by this treatment, and when the whole history was most precise and clear, I am compelled to believe, that even in that country as well as in France, the palsy of marsh fever is not understood as it deserves and requires, important as it is; while I am sure that they who will seek for such cases, will soon find ample confirmation of all that I have here asserted.

Of partial palsies in the face, and of more general ones in the legs and in the arms, traced by the patients to cold, and, under my own views, appertaining to intermittent, I have known many instances rendered complete or incurable by bloodletting, when, from my own experience in similar ones, I have reason to believe that they would have passed away had the physician not interfered.

Of these, I need not relate the cases themselves, since the fact must be familiar to almost every practitioner: while I am bound to remark that although often attributed by the patients to cold, it is the usage, that of habit and carelessness, to imagine some affection of the head, and to treat them accordingly by evacuations; thus generally aggravating or extending them, or rendering them incurable. Even when, in more careful hands, or from whatever cause, this pernicious practice is not followed, they are viewed as merely local disorders, and treated in a manner which is nugatory; in consequence of which they often also become inveterate, and at length possibly, incurable. So important do I consider this view of paralytic diseases, and so entirely have I found it neglected, even by modern and recent writers on palsy, as well as by writers on

intermittent, that I almost wish I dared take room for such cases as might serve to make a deeper impression than what I ought perhaps to expect from this general statement, strongly as I wish to urge it by thus dwelling on it.

When I name this neglect, I ought to point it out distinctly, that a term thus often carelessly used may not be supposed carelessly applied. The fact itself is, that if it has not been my good fortune to see every treatise on palsy, I have read a great number, and the most recent; while I may conclude that what the latest compilation has not noticed, is not very likely to exist. And if, in these books, I have found no account of such a cause of palsy, in some, even in the most recent of all, (which to avoid appearing to censure the author I will not name,) there is not even the slightest allusion to it; as if the physician, writing on this express subject, had never even heard of such a cause for the disease which was his especial study. And when I recur to a long series of observation, much more on the practice of others, of course, than in my own, I find such a mass of cases where it was to be often proved, very often suspected, that the paralytic affections arose from this very cause, that I am compelled to conclude that, in the first place, the

cause in question is a very general cause of palsy, and, secondly, that the error of practice arising out of a wrong theory and the common one, is the source of the far greater number of incurable palsies daily met with in society; the increase of which also has been notoriously great for some time past, while it bids fair to proceed in augmentation, as the diseases of Malaria, from whatever cause arising, are themselves increasing, and as the improper practice to which I have alluded becomes also daily more prevalent.

But besides the more palpable and sudden paralytic affections attending intermittent, and under whatever modification or in whatever stage of the disease they occur, there are others of a more gradual nature which it is necessary to point out, not merely from their bearings on the practice in this disease, but from the light which they throw on the nature of intermittent, and very particularly on the other local affections belonging to it. If the variety in the effects or the appearances may be considerable, regulated as these must be by the nature of the nerves affected, and by the extent of the affection, it will be sufficient to describe one of these cases, and that account will perhaps also form the most convenient description.

This was an instance of a relapsing or chronic quotidian, in which there had, at no previous time, been observed any affections of this nature. During the relapse in question, which lasted the more general time of six weeks or two months, there came gradually on, a feeling of weakness in one leg, and more particularly in the foot, which increased so much during the disorder, that the patient could with difficulty make a step on that foot. And although there was no pain, or Neuralgia, it was easy to trace with the finger the course of the fibular nerve from the middle of the leg into the foot ; as the slightest passage of the finger over it was attended by the well known tingling sensation produced by a pressed nerve ; while a stronger pressure where it is nearest the surface, gave the equally well-known shock produced by striking the elbow, in another superficial nerve. It was obvious that the muscles chiefly affected in this case, were those to which this nerve principally belonged, and therefore that it was in a diseased state ; that derangement appearing to consist in a diminution of its energy or power, added to an increased or morbid sensibility. The analogy of this to the proper Neuralgia is evident ; and it must be considered, in fact, as a modified degree of this dis-

order, offering one of the proofs, out of so many, respecting the real nature of this disease, or its connexion with intermittent and Malaria.

In this case, the relapse now described was succeeded by one much more severe, and successively by a third, more serious still. In these, the affection of the nerve of the leg, which had become little noticed during the interval, returned with increased severity ; while, in the first, there came on a similar affection of the ulnar nerve of the right arm, and in the second, a similar one of the left ; the others remaining. In this, most complete attack, the courses of the nerves in both arms could equally be traced by the finger in the same manner ; while, further, the patient was unable to extend the arms without immediately feeling the tingling, as of a compressed nerve, along the whole course, from the arm-pit to the fingers ; that sensation being increased by increasing the extension. And in this case also, it was evident that the muscles chiefly supplied from those nerves were the ones affected ; being feeble, or occasionally benumbed, as in the leg. Whatever be the exact affection of the nerve in this case, it is plain that it must be of a local, and, if I may use such a term, of an anatomical nature ; or that it was one which might possibly

have been ascertained by dissection and inspection, had that been possible, and were we sufficiently acquainted with the intimate or ultimate structure of a nerve.

I need only further add respecting this case, that while the nerves of the arms recovered, yet very slowly, after the cessation of the fever, that of the leg remained diseased for many years after, and perhaps continues so still; extremely sensible on casual pressure, even as far as the toe, so as to render great precaution necessary in walking, while the debility of that leg remained equally marked. If we see here the resemblance of this condition to that which succeeds to decided Neuralgia, so is its resemblance to the effect of sciatica on that particular nerve equally obvious; while I propose hereafter to consider sciatica, in all cases, as a pure and perfect Neuralgia.

Considering apoplexy to be one of the general or more extensively constitutional anomalies of the intermittent, or of marsh fever in general, as it is also the best known, I would willingly have separated it from the less general, or more local disorders of an analogous nature, or from the paralytic affections depending on the same cause, and deferred those till hereafter, so as to have

treated of all the confined or partial disorders in one general view. But their natural connexion rendered that inconvenient; nor, where palsy is sometimes a general disease, and sometimes a purely local one, is it possible to adopt any arrangement which shall be unexceptionable. To have introduced it here was indispensable, even though it must be noticed again hereafter: and while I am bound to quote such authorities as I can find, in support of these views, I may therefore introduce them here, and perhaps more usefully than at a future period of this essay.

As I have more than once remarked in this essay, while the observations, on which it has, throughout, been founded, were purely drawn from my own experience, without reference to authors, without even being aware that what was not taught in modern systematic writers and medical schools was at all known, and as the very essay itself was written before any such references were made, I shall here, as on other occasions, supply the parallel cases and authorities which I have since found, without disturbing what I had written; because thus, as it appears to me at least, will the reader feel more confidence in the facts, as being the uninfluenced observations of independent and remote observers.

On many of these cases, as on their authors, I must also remark, what I think essential, but for purposes of utility, not for the sake of criticism, that it has rarely been seen that the paralytic affections were really an inherent portion or variation of the disease, while, too frequently, they have been looked on as mysterious cases, more generally as incidental combinations. The former has been particularly the case where these affections have possessed any remarkable peculiarities, and most of all where they have been united to other nervous symptoms. To place the few cases which I have thus selected out of the number, in a condensed and approximate order, and with such remarks as I may venture to make on them, will therefore, I trust, be of the greatest use, by opening the eyes of practitioners to what has been strangely neglected or misunderstood. And if it has not been seen, and by physicians of such high reputation as I must here quote, that palsy was so often but a mode of intermittent, there is the more excuse for the large mass which can never do more than follow; while I am inclined to attribute this serious error, in a great measure, to the errors that have been as universal respecting Neuralgia, or to ignorance of the real nature of this disease: while the occur-

rence of palsy in those local intermittent affections, not only illustrates the general fact, but draws still closer the analogy between those diseases and ordinary intermittents.

As a marked instance of a paralytic affection of a peculiar character, though permanent, Sauvages quotes a case from Fabricius, where, in an epidemic dysentery, which, I need not remark, is but a mode of marsh fever, there was a palsy in one arm and the alternate foot, produced, says he, by the improper use of astringents and opiates. He calls it obscure; thus additionally proving that neither he nor his author was aware of the connexion which I have here been pointing out. The only other remark I may make on it is, that it could scarcely have arisen from any conceivable disorder of the brain, as it is too much the custom to suppose; since two parts so discordant in position, could not thus have been easily deranged through the brain; while it offers a tolerably convincing specimen of the origin of this disease in derangement of the nerves themselves.

But when the same nosologist quotes from Chaptal, a case of Hemiplegia under the very term tertiana hemiplegica, it might be supposed that the criticism which I have just made was

unfair, particularly as the disorder was cured by purging and bark. Yet we find nothing among those details and remarks, of which he is assuredly not sparing, to make us think that he was really clear on this subject; and as to this particular case, in spite of his term, it would appear that the bark was given to cure the tertian, and that the combination was considered as accidental rather than dependent.

A more marked case, quoted by this assuredly learned and industrious physician, ought, it might be supposed, to have completely opened his eyes on this subject; and with this and other instances which he has quoted, together with the adoption of the term above mentioned, and not only of that, but of other terms to which I have here often referred, I had expected, on consulting him, to find not only this part of my subject, but the whole question of simulating intermittents, not merely illustrated, but established and anticipated: an expectation in which I was disappointed. In this case, the paralytic affection came on every day, and disappeared with the accession of the proper quotidian.

Palsy in the form of paraplegia, of a periodical and quotidian intermitting character, is also described by Torti, from Chaptal. Where the

same writer, from the same authority, quotes a similarly periodical hemiplegia absolutely perfect, while it was quotidian and intermitting, lasting also for ten hours, he remarks that it was always increased by purging as well as by bloodletting, and that on changing the practice, it was cured by bark in nine days. This particular case is of value, as a warning to practitioners; and, from the nature of the attending and preceding symptoms, perhaps of somewhat more value than common. No intermittent fever seems to have been at first suspected, by the description, which notes only a vertigo, attended by a full and quick pulse and a burning heat in the head. How easily this may, in any other such case, be attributed to disease in the brain, is most apparent; as in truth I have seen more than once in the practice of others, while unable to enforce my own views; while it is abundantly plain, that had these symptoms been duly noted and described in the related cases, they were but those of intermittent fever; possibly, indeed, in this instance, and in other cases besides this one, partial, as that disorder so often is in its paroxysms.

A case from Morgagni is even more remarkable than some of the foregoing: because in this, one side was permanently paralytic, while the other

was attacked every evening with a palsy which disappeared in the morning; the patient, after seven or eight such fits, dying of peripneumony. Various irregular cases of the same nature, where the palsy was attended by convulsions, are noted by the same author; while as far as I can perceive, neither he, more than Sauvages, appears to have been aware of the true connexion between the palsy and the intermittent. And when I consult the writers on palsy specifically, even those as recent as Cooke and Swan, I do not find, although such cases are quoted and referred to, that their nature had been apprehended, or that any suspicion seems to have been entertained that Malaria was a cause of palsy, or that there was a mode of this disease especially dependent on intermittent.

It is scarcely less remarkable that although in the medical reports of the army, it is noticed that a predisposition to palsy and apoplexy was frequently produced by "fever, visceral disease, and dysentery," no such remarks are deduced from this, even by those writers on palsy who quote it, as, I trust the reader will now perceive, it ought to have produced. Whether Strack, who has collected so much respecting anomalous intermittents, had been fully aware of this con-

nexion, it is not possible to know; but if we judge from his book, where he relates but one case, and that of apoplexy and hemiplegia united, in a girl of eighteen, and cured by bark, we should conclude that he had not formed any definite ideas respecting it, nor generally indeed on the entire subject, since he enters into no general discussions on the question: rather appearing to have been guided in his practice by a strong affection towards this remedy, as a means of cure in numerous diseases never considered by him or any one else as appertaining to intermittent. Hence his work, valuable as it is, is only so as a register of useful cases; since he has left to others to generalize and explain what he apparently did not view in the light which it required.

And while I feel a great debt to a writer from whom I have derived many valuable facts, perhaps even the more valuable from their precision and simplicity, and from the total want of any general theory under which they might have been observed and registered, I must be allowed to say, that they appear to be, throughout, in a philosophical sense, empirical facts, and under an empirical practice: while if even perhaps more valuable for my purpose, from their independence and freedom from bias, from that bias which a phi-

losophical view might have given them, I must consider that we have thus lost a great deal which his experience and assiduity, united to his apparent accuracy, might have collected, and would have collected, under such general views as the present; of which he seems to have entertained no idea, or of which at least he has assuredly given no indication.

If I have remarked that Morgagni describes cases of this nature attended by convulsions, as there are also cases, noticed here, in another place, where mere convulsions or perfect epilepsy, alone, formed the variations of the intermittents, others may conjecture whether an obscure passage in Hippocrates, where he says that convulsions sometimes supersede and remove a fever, may not be explained in this manner, since, otherwise, the explanation is not very obvious. One case, mentioned by M. Baumes, is valuable on account of its definite character under this combination, and because it may serve to illustrate more obscure ones: the paroxysm, which, in my view, should have been that of an intermittent, consisting of convulsions, attended by a palsy of the tongue.

Of such obscure cases, I shall point out one especially, which has been represented as of a

very mysterious nature: and while, to myself, it appears that it can be explained in this manner, and only in this manner, or that it was a chronic and a simulating intermittent, I must leave that to the judgment of others, after they have read this essay, while apologizing to those whose difficulties I thus endeavour to explain. This is the self-related case of Vieusseux in the *Med. Chir. Trans.* reported by Dr. Marcet, which I need not transcribe, as it is so easy of access, while of great length: and if, on reading, it may appear too intricate for the solution which I have proposed, it must be recollected that when a patient, and he a physician, describes his own case, and that a nervous one, minutely, the details here found are not a very unnatural result. But I shall allow practical physicians to reflect on this subject, and to consider how far they may find solved in the same way, any similar difficulties or mysteries that may have occurred in their own practice.

To return to the principal simulation of intermittent connected with this one, I need not repeat that the case of apoplectic intermittent is much better known, and is indeed really understood, at least in Italy: a fact which renders it the more surprising, that obscurity or misapprehension should have so generally existed respect-

ing the paralytic variety. On this, I have nothing therefore left to do but to quote a few authors for the purpose of reference or illustration. That single cases are common, I have already said: and he who desires to read authority on this subject, may consult Ramazzini, who describes this occurrence at all periods of the disease as well as at the commencement. It was also known to Morton, who, perfectly aware, as we must suppose, of its nature, recommends bark. It is a more remarkable fact, and especially worth noticing, that in certain seasons, not less than in certain situations, as I formerly remarked, or in certain epidemics, this variety has prevailed: while it will form sufficient examples of this, to refer to Thion de la Chaume for two seasons of such a tertian occurring at Ajaccio in 1773 and 1778; and, for a similar event, in Bresse, the most pestiferous part of the Lyonnais, to Delorme. How far the epidemic prevalence of such a variety may prove that Malaria is a variable poison, or that its different effects depend more on quality than quantity, is, after what I have formerly said, on this subject, a question which I do not well know how to contemplate.

In terminating this part of the subject, I must not omit to mention an instance of the shaking

palsy, as it is called, following an intermittent, described by a Scottish physician whose name has escaped out of the list of my quotations. A particular value attached to this case is, that arsenic has been frequently accused of producing an effect which we here see is but a result of the disease itself.

Having dismissed this very main portion of the present subject, I cannot well elucidate what immediately follows, without returning to the chronic intermittent in its simple form, and to certain facts which were passed slightly over that I might notice them here, or were purposely reserved for the sake of the present elucidation.

Whatever the type may be, the paroxysm itself is subject to variations from the more perfect form of that as already described, analogous to those differences which are found between the chronic and the simple remittent. Thus it may happen that the duration of the cold fit may be very brief, and also very little marked in any manner. The sensation of cold may be so partial as to occupy but a limb, or a single spot, and even but for a few minutes; while, if more universal, it may be equally short, and also slight. It will further happen that there is not even the feeling of coldness; and the substitute for it may

be the comatose state, in a slight degree, or mental affection alone, consisting in melancholy or irritability, or displaying itself in various practical modes unnecessary to detail ; or, it may be, general restlessness, or mere inability of mind, or the sense of fatigue, or debility, or, even more simply, a mere insensibility to pleasurable impressions ; symptoms occurring in the very slightest cases only, if they occur alone. Or, in somewhat severer degrees, it may consist in thirst, in loss of appetite during a certain period, or in headach ; or it may be marked by nothing but an increased secretion of urine, or lastly, it may be scarcely sensible to the patient himself, used to constant ill health, and be only recognized in that peculiar physiognomy which I have already described. Thus also, more or fewer of these symptoms may be combined, or they may vary in degree, separately or united, so as to produce an infinite variety of appearances to the practitioner ; while it is under these anomalies or imperfections, that this disorder is often the subject of mistakes similar to those which occur respecting the chronic remittent. Hence as in remittent, imaginary atrophies, imaginary consumptions, dyspepsia, hypochondriasm, nervous affections, headaches, and much more, leading to wrong

practice, and not seldom to the increased suffering of the patient or the entire ruin of his health.

In the chronic intermittent also, there are the same uncertainties respecting the hot fit, whether as to length or intensity; as is not less true of the sweating stage: and in the milder cases, it is frequently difficult to mark any of the portions of the paroxysm; while, further, any one, or even two out of the three, may be absent altogether, or else so slight as to escape a careless observer. In extreme cases of this nature, the whole paroxysm is an indefinable period of various inconvenience, with scarcely any point where either of the stages can be marked; and those are cases which, for want of being aware of the cause, or want of careful observation, appear mysterious, equally to the patient and the practitioner; often leading to bad practice, and very often also, as in similar remittents, subjecting the former to the charge of nourishing imaginary diseases.

When the paroxysm is more palpably a febrile one, the irregularity is sometimes such, that the whole may be, or appear to be, a cold fit; neither heat nor sweating appearing; and such cold fits will even last for twelve hours or more. In other cases, an endless number of cold and hot

periods will occur, as if twenty or thirty paroxysms had been condensed into one period; while in others again, the whole is a hot fit, or, as also happens, a mere period of sweating, or of a tendency to this which is roused on the slightest exertion; the preceding portions or stages, if they really occur, being insensible. And thus also a temporary or diurnal variation of the pulse is sometimes the only palpable appearance, at least in a patient not given to complain of moderate inconveniences, or not morbidly alive to his own feelings.

Particular cases without end could be described in illustration of these states; but if amusing to a certain class of patients or readers, it would be an useless labour in a scientific view. Among such, will be found the endless strange cases known in America by the name of dumb ague; as they would include also much of the history of the common people, as well as of their betters, in the countries especially exposed to these diseases. But a subject fertile almost to romance, must not be indulged in, where enough remains of what is necessary, to occupy both the writer and the reader for many further pages.

If the cases which may be ranked under the preceding general sketch can always be assigned

to their true cause, with moderate attention and a due knowledge of this disease, it is less easy to judge truly, or rather the errors are chiefly committed, when some one symptom is very distinguishable beyond the rest ; and most of all, when these are of a local nature, or when they are accessaries rather than essential parts of the disease. The former cases might be distinguished by the two terms obscure and anomalous, were it necessary, or were it indeed always possible, to define the limits, in practice, under words the sense of which is apparent : the latter may also be sometimes included under the term anomalous ; and they become the simulating cases of this chapter, when, from the absence or obscurity of the periodical fever, and from the marked and important nature and prevalence of the attached symptom, they are liable to be mistaken for separate or original diseases. Were I more largely in possession of such varieties, I might have attempted to classify them under those separate terms ; as it is, I could not do this to any purpose, and shall therefore describe those which I have seen, without any pretence to order. And if I have been obliged to reserve some of those for a separate consideration, because of their having been erected into separate diseases, the

reasons which have thus compelled me will hereafter be apparent to the reader.

In commencing this examination, I must even confound in some measure what must be considered as effects of the intermittent, with what appear to be symptoms or modes, because of the light which the one set throws on the other; being sensible of the inexpediency which I could not avoid, of separating the paralytic symptoms of those diseases, from the paralytic consequences which succeed to other and different symptoms.

It is a noted fact, that it is the effect of chronic or habitual intermittents to injure or destroy the intellectual faculties, as I had occasion to point out already when treating of remittents. This is notorious in the countries where these disorders prevail, and very remarkably, as I formerly said, in the Maremma of Tuscany, where even absolute idiotism from this cause is common; the fact being marked, even to cursory travellers, by that apathy, listlessness, or indolence of mind, gradually approaching to fatuity, which I formerly described. If the cause be obscure, it cannot well be more obscure than every thing else which belongs to the action of Malaria; while the fact of the universal influence of this poison on the nervous system, local as well as general, leaves no

difficulty, at least in believing that it may produce such effects on the mind.

It seems to me that there is here an analogy between the local and the general diseases of the nervous system, worth noticing : but whether it is much more than a coincidence, whether there are really analogous causes for these analogous effects, it would be now impossible to decide ; as it may almost be thought presumptuous to suggest.

In the intermittent, as a new disease, or for a long period of its existence, as sometimes happens in the chronic or mild remittent formerly described, the effect which the mind undergoes is chiefly a state of irritability, or a condition generally, which may be considered to belong to excitement, if we can venture to use so vague and abused a term ; or to consist in a susceptibility to pain, or in an increase of sensibility. Every thing marks this state of things : the peevishness, the false and exaggerated views of evil, the morbid excitement of the mind, extending even to the intellectual powers, and sometimes even with good effects, as I formerly observed, as far as certain of their actions are concerned, and lastly the increased sensibility to bodily suffering ; to say nothing of nervous sensations beyond numbering. But in its progress, the opposite effect

generally takes place, or the mind is found to be benumbed; and hence, among many other appearances, that striking listlessness and submission to the present evils, that total want of even a wish to escape them, which is so striking a feature in the mass of people in countries subject to Malaria and its diseases. Thus also, in single cases, even in our own country, the same effects take place from a long continuance of the disease; while debility of mind, proceeding even to absolute fatuity, sometimes occurs, and especially if to this be added the injudicious interference of physicians, by means of bloodletting and other debilitating remedies. That such a condition amounted at times even to an insensibility to bodily injuries, I remarked formerly on French authority; while what I have now said explains further the apparent contradictions on this subject.

That this disease produces an insensibility to pleasurable impressions, if I have but recently mentioned it, is a fact too remarkable in its results not to be noticed here as a part of the general illustration of this condition of the nervous system. Nor is that consequence a secondary one, originating in false or perverted moral views, or in an aberration of the reasoning faculties;

since it appears, on the contrary, where that does not exist, or to be, absolutely, an insensibility, or a primary disorder, in the nerves of those organs of sense, which are the mediums of pleasure. I cannot doubt this, from the facts related to me by patients thus suffering, and who were at the same time good metaphysicians; those facts and their complaints being, that beautiful objects, such as pictures, natural scenery, and so forth, which, before that, or when in health, had been most pleasurable or engaging, seemed to make no impression at all, on the sense; and not because their minds were affected, because these things were viewed under a state of mental anxiety or derangement, since that state of mind was not present, but simply from failing to make the usual and expected impressions. From such patients I have received also the same complaints and statements, with respect to the other usual causes of simple pleasurable feelings; and very particularly from those who, as musicians, were accustomed to delight in music, not less from science than feeling; those being, that they seemed to suffer under a positive insensibility as to what used to be a source of the most refined delight, although labouring under no affection of the temper, nor any of those sensations commonly

called hypochondriacal, And thus have others complained that the most grateful odours had ceased to give pleasure, that the scent of a rose was not only powerless, but produced absolute pain by reminding them of what it once was; while every attempt to revive the former associations connected with this and other similar objects of delight, was unavailing. And what perhaps will illustrate this condition still more strongly, though it may possibly excite a smile, was the complaint of one of these patients, deeply in love, that in this state of disorder, the touch of the hand of the fair object, which used formerly to reach his heart, appeared no more to him than the contact of his own or of the most indifferent person's. That all this has been bitterly complained of as adding deeply to the torments of this disease, by those who were conscious or informed of the cause, and who were at the same time persons of refined taste, education, and feelings, it is almost unnecessary to remark.

Now, "*mutatis mutandis*," this is precisely the progress in those cases where single nerves are affected, instead of the whole cerebral system, or when such local affections are severe in proportion to the general one. In the Neuralgia, the first action of the cause is an increase of sensibi-

lity reaching to the highest imaginable degree of pain, and indicated further by numerous symptoms which will be more fully pointed out hereafter. But the progress of this is to palsy; or the excessive sensibility is succeeded by a diminished one, as if, in this case, as well as in the former, the sensibility had been exhausted by previous over exertion or over excitement. The former may be considered a succession of effects as to the whole nervous system, corresponding to that which, in the latter, occurs in a single nerve, or in a single portion of one. And what tends still further to confirm this view is, that if the debilitating or evacuating system of physicians accelerates or augments this effect in the former case, or as to the whole brain, so does the very same practice produce the analogous effects as to the single nerve; as it is thus that the paralytic symptoms which might otherwise be long in taking place in Neuralgia, are accelerated or increased. If this analogy is as well founded as it appears to me to be, it is not only curious as a question of pathology, but it serves to confirm the views hereafter deduced from other arguments, respecting the true nature of these local diseases and their connexion with the causes of intermittent. I need scarcely remind the reader

of the analogous fatuity, formerly noticed, which occurs as a consequence also of remitting fever, and most generally under similarly improper treatment. The facts are in reality the same, and so are the general causes and conditions; though some variations of effect take place, proportioned to, or depending on, the differences that are found in these two varieties of marsh fever.—And if I have been here compelled to separate these consequences, and to treat of them in two places, not avoiding therefore some repetition, and disjointing a subject which I would gladly have brought under one general view, this has all arisen, like much more of similar inconvenience, from having been compelled to follow the usual practice of physicians, in separating these associated diseases, or rather these two varieties of one disease.

Did I think that any specific evidence on this subject was required, I could easily relate many individual cases of debility of mind, and of a state of almost ultimate fatuity, occurring from the action of chronic intermittent; and what is perhaps even more important, some very striking ones, in particular, of the effect of bloodletting in producing this consequence. I dare not prolong these pages for the former purpose; since what

I have said, being a deduction from facts and cases, could receive no further support from the cases themselves: yet I will note one or two briefly which relate to the latter fact, because of the very marked nature of the action of the misapplied remedy.

The first of these was a patient who had been subject to repeated attacks of quotidian, in successive years, under my own care, while a vigorous and intelligent young man of twenty-five, in the upper ranks of life. In a subsequent and similar attack during my absence, it was the fancy of his physician to prescribe bloodletting within the first days of the disease, under some erroneous view of its nature. No very obvious consequence followed the first operation; but on the second, it was remarked that he ceased to complain as he had done, which appeared to give the temptation to a third trial, immediately after which he fell into a state little short of idiotism, while the quotidian became also attended with many anomalous symptoms. Thus I found him, and just in time to prevent a fourth bleeding which would probably have produced an extension of these consequences, and might easily have terminated, as I have more than once seen, in palsy, epilepsy, or death. The disease was cured

in the usual way, by bark; but the debility of mind was not removed for six months, while I have reason to suspect that it was even much more durable. If such effects have not been oftener observed, it is probably from the much greater predominance of this disease in the lower classes, where such mental consequences would attract little notice, or where the general neglect of the mental faculties, and the slender uses to which they are applied, would render such consequences insensible.

In another case, which I could watch, but had no opportunity of treating, the history, and the age, were similar; but, in the paroxysms, this patient, himself a military surgeon, was tormented by headaches. Successive bloodletting and cupping, on the usual principle, brought on at length fatuity, but so slightly, that after a few weeks from each bleeding, he began, on every occasion, as he does yet, if more slowly, to recover his intellects. With that, he also recovers some complexion, with a return of strength and appetite; but whenever a casual headach returns, or if an imagination naturally rendered morbid, in his physician, possibly, as well as himself, conceives that there is about to be another "flow of blood to the head" he is again subjected to bloodletting,

and again becomes a mere infant. What the final result may be, it is not very difficult to foresee.

I should now add, that while I have made a considerable search into authors, on this point, I have had little success in discovering cases or remarks by which to support the opinion that this consequence was the frequent result of similar and improper treatment, while there is no want of evidence of the mere fact as connected with intermittent: the former opinion, like most others in this work, being derived from my own observations. Whatever suspicions I may entertain as to some few not sufficiently positive to quote, they are better left to the judgment of others: though from what I do read in modern books, I entertain no doubt, that, in this as in remittent, the depravations of intellect so common, in chronic cases as after acute ones, have been the result of an improper practice; and if this is not to be deduced in so many words from the narrators themselves, that is a circumstance of which the causes are too obvious to require explanation. Whether the ancient and foreign writers who have often so well illustrated the anomalous intermittents, have been unaware of this frequent consequence, or have overlooked it, or explained

it in some other manner, is what I cannot decide: but I am pleased to find at least one high authority, and equally distinct, in Sydenham, when he remarks that fatuity is not an uncommon effect of tedious intermittents, and very particularly where evacuations have been excessively or improperly used. Hence his *Amentia Quar-tana*; since it seems to have been under that variety chiefly that he had seen this consequence.

It would also appear that mental disease of a more severe character may be produced by these causes; or that it may occur in so early a stage of intermittent that we ought perhaps rather to refer it to the cause of that disease, than to the disease itself as a cause of the second order; while, occurring at a later one, it may be supposed a consequence of the previous operation of the fever on the nervous system, as happens with respect to fatuity. In the former case, the analogy would be to apoplexy as the primary attack of Malaria, and the disorder thus produced would be an anomaly, or a purely simulating case, as the latter must be classed with consequences. Had I been in possession of more cases, I might have distinguished and separated these circumstances, as I might also have investigated the whole subject to more purpose: but under such a poverty

of facts, I must content myself with much less, leaving what I cannot better illustrate now, to a day of further information.

I allude to mania; though it is a somewhat obscure question, since, in ordinary mania, where there is no reason to suspect this cause, the exacerbations are sometimes regularly periodical. I do not wish to go deeply into a subject which appears to me to stand very much in need of elucidation, and must therefore request my readers to examine carefully such cases of this nature as they find on record, or may occur to them in practice; while it would be proper that this suspicion should be better known to practitioners at large than it appears to be, since I have seen four cases at least of absolute and pure mania, of most distinct tertian and quotidian forms, which, from this ignorance as it appeared to me, became the subjects of gross mistreatment. The exacerbations were, in all, as distinct as those of a common intermittent would have been, and as regular, while the two tertian cases left a day intermediate, of the most entire sanity of mind: the period of the paroxysm being a perfect mania, and not a febrile delirium, and while, in fact, no marks of fever could be discovered. And in one of these at least, the cause was as easily as

it was distinctly traced ; since the disorder had commenced as a common tertian, which seemed to have entirely disappeared to be exchanged for the mania: while of the other, whatever my suspicions were, I could not procure a distinct previous history, from the inattention and ignorance of the friends and the patient. In the quotidians, not only were the accessory, if obscure, symptoms of intermittent to be found on an accurate inquiry, in both the cases, but while the original cause, in one of them, was distinctly traced, so was the truth of the conclusion confirmed by the success of the method of cure which was adopted, after great maltreatment.

As to one of the quotidian cases just noticed, like some other examples of similar mania which have occurred to me, I feel incompetent to decide whether it was connected with intermittent or Neuralgia, since I could procure no sufficient information respecting the previous history. But while, as will hereafter be more apparent, I do not consider the distinction of any moment, I think it possible that although such a mania may be the replacement of some intermittent or neuralgic disorder, arising as it does, in or from both those forms of disease, as well in their natural course as from improper treatment, so it might

also constitute the primary attack, or be the first and sole effect of the cause. There is no want of analogy to support such a view. The primary attack of Malaria is sometimes in the form of delirium, or absolute mania, as, in other cases, it is in that of apoplexy; and instances of this, even to an epidemic extent, are noted by various authors. The primary attack of Neuralgia, also, as well as of intermittent, is sometimes palsy without pain. And since cold will produce palsy or fatuity, primarily, since fatuity, palsy, and mania, are but analogous or connected states of the nervous system, as I shall hereafter attempt to show, it is as possible to conceive that mania should be the immediate and sole result of the cause of Neuralgia or intermittent, as that this should be palsy or fatuity.

And this argument from analogy is supported by facts: since among other cases, Vandermonde describes an intermittent mania, or delirium, of two months' duration, which was cured by bark, having been all along without any febrile symptoms. Whether a periodical mania, termed lunaris, and described in the *Ephemer. Naturæ Curiosor.* may be quoted as another example in support of the same view, I am not willing to decide. But it is evident that whether we sup-

pose the cause, or the disease, to be Neuralgia or intermittent, it does not affect this argument: inasmuch as wherever the action is local, it may, under different modes of viewing the disease, be ranked with either. As to a mania dependent on intermittent and following it, there is a confirmation of that fact, and on a very large scale, by Mezeray. In this case, as in those of fatuity just quoted, the accessory or secondary cause was similar maltreatment, or the abuse of evacuations: but the result, which occurred in great numbers of people, was a perfect mania, or a durable phrensy or delirium without fever. It is scarcely indeed more difficult to comprehend how this should happen than fatuity; since the conditions of the nervous system, or brain, in both cases, cannot be very remote in kind.

To pass from these subjects to one of a very different nature, that nosology, to which I have so often referred, and which, be its logic even as faulty as has been said, far surpasses in real value the whole of its competitors, has enumerated a variety of intermittent under the term emetica, referring it however to tertian. It is very necessary to notice this particular anomaly, on account of the errors to which, like all other anomalous cases, it gives rise, and further, because it occurs

under the quotidian type as well as the tertian, to whatever variety in these fevers that return may belong.

I have already remarked that the ordinary paroxysm of an intermittent sometimes terminates in vomiting, while nausea also occurs in these as in the chronic remittent, often very durable, and forming a very distressing addition to the other symptoms. In the cases to which I would here especially call attention, and which are the chronic ones, the vomiting becomes the most conspicuous symptom, or even the only one which the patient may notice; when inattentive practitioners are subject to mistake it for an original disease, dependent on some mysterious cause, or to assign a wrong one to it.

It is true that there occurs, and in females almost exclusively, a disease of this nature, of an original or separate character, and which must not be confounded with this; while the distinction is always rendered perfectly easy by the periodical returns of the disorder under review, and, to a careful observer, by the presence of some other symptoms of chronic intermittent, however slight, or by the alternating of this one with some other symptom, or lastly by inquiring into the previous history of the patient. I must also re-

mark, especially, that it is very commonly preceded by a state of drowsiness, of which it is the termination. It is, in reality, in all the cases where it occurs, the real termination of the paroxysm, as in the well-marked intermittents; though that may be so slight as to produce little inconvenience to him who, long accustomed to this disease, does not know what health is. Thus at least has it appeared to me; but considering how often the stomach appears to be the principal object of attack in all the fevers of Malaria, I can also conceive that it is a real misdirection of the febrile paroxysm, just as that is sometimes misdirected to the heart or as it produces the various affections classed under Neuralgia; while the possibility of what I here call a misdirection, in chronic cases, is illustrated by what happens in the black vomit of remittent, and in the inflammatory affections of the stomach occurring in all the severer marsh fevers, of whatever type or form.

Those who may hereafter have opportunities that have not occurred to myself, will easily, with this hint, discover how the fact really stands. I need only add, that as far as I have seen, this vomiting is very transitory; occurring whether the stomach is full or empty, and, when past, leaving it without any derangement, or rather

being the immediate forerunner of the interval of temporary health. And, when its period is arrived, the slightest cause, even a glass of water, will bring it on instantly ; while it also comes on at times with so little previous notice, that the patient has not even time to leave his seat, or change his position. Thus have I seen it continue for three months ; being either removed, only by the cessation of that particular relapse, or else becoming exchanged for some other local symptom. When it thus occurs in cases of Neuralgia, as is also the fact, the explanation is now rendered easy ; while it confirms, if that could need confirmation, the views here entertained of that disease. As to remedies, its cure, it is plain, must be sought among the general remedies of chronic intermittent ; while I may add that the ordinary kinds of medicines in use by that class of practitioners which sees nothing beyond symptoms, serve only to accelerate the period which they can neither prevent nor cure.

I formerly remarked that hysteria, or nervous affections such as belong to that disease, sometimes occur periodically, or otherwise, in remittent ; and thus also are they found in the chronic quotidian, as well as in the tertian and quartan ; where this variety is noticed by nosologists.

These cases are occasionally very troublesome ; and that they should be obstinate, is to be expected from the inveterate nature of these chronic diseases ; while such obstinacy must also often depend on the ignorance or error of the practitioner as to the true cause. The symptoms, whether for number or intensity, may be any or all of those which belong to this Protean disease ; while I must remark also, that the periodical vomiting just described is sometimes united to them, tending, as I have seen, still further to mislead the practitioner unaware of the nature of these obscure intermittents. Thus also may one slender symptom alone occur : and in this manner have I seen the globus hystericus, in males as well as females, returning at daily regular periods, and enduring for many months, nay, like the disease in other forms, even for years ; while its true nature was proved by its becoming exchanged for another anomalous symptom, and by the previous history of the patient, as well as by the mode of cure.

I can give no other direction for distinguishing this hysteria than what I have already given as to the vomiting, and as to the whole of this chronic intermittent ; but while I need not also point out any other than the general mode of cure, I must

caution practitioners against bloodletting, because it has been often recommended and often practised in these cases; and with the result which it invariably has, in every case and variety of chronic intermittent, of aggravating the disorder, or of inducing new symptoms, and, finally, of destroying the patient's health for ever.

If I am, myself, inclined to consider the palpitation which is one of the most remarkable and the most distressing of the anomalous symptoms or forms of chronic intermittent, as a Neuralgia of the heart, as one of those local misdirections of this disease which, affecting other nervous organs or separate nerves, produces those very marked disorders, and if therefore my own desire would have been to have ranked it with those, and thus to have deferred it at present, I am fearful of giving more cause, by these new views, for that incredulity and those objections which I foresee. I shall therefore treat of it here as a merely anomalous symptom of chronic intermittent; reserving to myself the privilege of a different and better classification, when the alarm at these novelties shall have subsided.

The modes, as to the patient's feeling and as to the recurrences, in which the heart is affected in these cases, are so various, that I must exa-

mine them at some length: a proceeding which becomes absolutely necessary, from the almost universal errors on this subject, from the pertinacity with which these cases are maintained to be independent nervous affections, or are referred to organic derangements that have no existence, and from the consequent maltreatment of the patients; to which are too often added alarm and anticipations, materially aggravating a disease which is in itself sufficiently distressing.

Increase of the velocity or of the strength of the circulation, or of both, attended by an increase in the force of the blow given by the apex of the heart, is the most simple of these affections, while this may be merely sensible to the patient himself, or else may be visible to a bystander. In other cases, that increase of action is attended by irregularities in the force; or there are occasional palpitations, of short duration, but repeated; or they are sometimes limited to single starts or spasms, or else there are intermissions under every irregularity that can be imagined. These disordered actions, which must be felt to be understood, are often attended with the most distressing sensations in the brain and in the whole system, affecting even the mind in various ways; producing among other things uncontrollable fear

or inexplicable alarm, and sometimes seeming to threaten immediate death. When of any duration, they also often leave the patient exhausted, as if from the excess of fatigue; and this, constituting an inexplicable derangement, often lasts during a whole day, or long after the palpitation has ceased. In the heart itself, among other strange sensations, it is not uncommon to feel as if it was grasped by a hand, and compressed; while there is sometimes also the sensation of its being paralyzed, or about to cease from motion altogether. In other instances, and in the mildest cases, the affection is no greater than that which commonly attends fear, or that peculiar and slight alarm which may occur, for example, in a timid or anxious speaker about to rise in public; and, apparently in consequence of association, it is the effect of this to produce alarm, or fear, or anxiety, for which the patient, aware of its real cause, can find no reason, but which another, ignorant of this, or morbidly active in seeking for moral evils, easily refers to events or circumstances in life that are dreaded or anticipated. Or, as will be very obvious, the principle of association produces, by inversion, the passion or feeling which, in the ordinary cases, excite these peculiar actions of the heart. Hence it is, that

to be aware of the nature of this disorder, is important to the patient ; as by explaining to him the true cause, it will prevent him from seeking for imaginary evils that will aggravate his sufferings.

Such are the more ordinary forms of this palpitation ; and how often it has been referred to enlargement of the heart, to ossifications, and so on, I have seen in but too many instances. But I must also remark, that this diseased action sometimes takes place in the inferior aorta, as well as in the heart, or is occasionally transferred from this organ to the artery ; constituting an affection well known to occur in what is called dyspepsia, which, for aught I know, may depend on many nervous diseases, but which, as before observed, I have often most clearly traced to the class of disorders under review. I need not remind the medical reader of the description of this particular disorder given by Dr. Baillie ; nor ought I to pretend to conjecture the cause or causes as it did occur to him ; but while I have traced it to the cause under review, I am bound to add that this inference was drawn from observing that it alternated in relapses, and indeed in periods of long duration, with a palpitation of the heart dependent on intermittent, and itself

alternating with relapses of common quotidian, as well as with the intermittent periods themselves, in a case of long standing subject to many other anomalies.

If the real cause of these affections of the heart be often obscure, there ought never to be any difficulty in ascertaining their nature when any other symptoms of chronic intermittent are present, when the patient is constitutionally subject to this disease, or is known to have suffered formerly from it, or when, as frequently happens, this affection alternates in any manner, with any of the ordinary, or of the anomalous symptoms of intermittent. These form the easier grounds of judgment to the physician, often as they are all overlooked; and in these several modes do those derangements of the heart often occur.

Presuming that the disease is regular in its returns, and connected with obvious intermittent, the palpitation, as far as I have observed, belongs to the same period of the paroxysm as the cold fit, or generally so; while in cases where it is the only symptom, or the only very visible disorder, it has equally appeared to me to be the substitute for this. Thus also, when slight, it may usher in the paroxysm, subsiding in a short time; and here it corresponds with that general

and common affection of the circulation which attends the commencement of the diurnal fit. The duration of a paroxysm of this kind, like the violence, is consequently variable; extending from an hour or less to twelve or more; possibly, in such cases, occupying the entire time of what would be a paroxysm in the common intermittent: and I have met with one instance of a double quotidian form, in which the two returns left very little repose to this organ during the twenty-four hours, and in which the patient was nearly deprived of all sleep, procuring it only during the very short intervals. This case, after lasting three months, while sentence of condemnation had also been passed against the patient, under the supposition of a disorganized heart, was cured in two days by the remedies of intermittent; proving clearly that the judgment which I had formed respecting it was correct.

Supposing that the returns of palpitation are regular, whether in the quotidian or tertian form, and further, if the duration of the attack is also limited, I have stated a case that ought never to leave a moment's doubt to the physician, even though there were no other symptoms of intermittent present. But it will often happen that there are others, such as an indication of a pre-

vious cold stage, or rather of its commencement; and that stage, if not marked by absolute coldness, being distinguishable by an acute eye, in the physiognomy of the patient. It is also not uncommon for it to be accompanied by a state of drowsiness, which, while it is evidently the coma of intermittent, is often, or perhaps always, mistaken for a derangement of the brain produced by that of the heart, and which thus leads to the erroneous and destructive practice of blood-letting, founded on the vulgar and not less fashionable dogma of "a flow of blood to the head."

I do not, myself, conceive that this disorder, the intermittent of the heart, or, as I would call it, the Neuralgia of the heart, can ever exist without some of the collateral symptoms of chronic intermittent, which I need not now repeat; being, I believe, attached to the chronic varieties chiefly, or being a chronic, and not an acute disease, as are, I believe, all the Neuralgias; any more than I can conceive any Neuralgia, however local and limited, so unattended, while I have assuredly never seen such a case. But if I say that all Neuralgias are chronic, it is not that I suppose this a necessary part of their nature, but that they may not be transitory as well

as intermittent. This however will be proved, or not, hereafter, when they become better known and better treated: and in the meantime, as far as they are such, it ought to be plain that this may be the consequence merely of ignorance and maltreatment, suffering the disease to establish itself and thus assume that character.

But the disorder under review may appear to be unaccompanied by such symptoms, to a careless or hasty observer, or to a practitioner generally ignorant, or ignorant of the true nature of this disease, or to one who adds prejudice to want of discernment or knowledge; as is notably true respecting common Neuralgias, in which this connexion is almost always overlooked, and where, had it not been so neglected, the theory and the practice too for that disease could not have so long been that discredit to physic and physicians which it has been. And as it is subject to many irregularities and obscurities, these irregularities, should it be so mistaken, as in fact it has always hitherto been, not merely tend still further to confuse the judgment of the practitioner, but afford him reasons for persisting in his errors, and further, for disputing the views here held out. I shall hereafter notice another ground of erroneous judgment, arising from the

term rheumatism of the heart, and from a false decision as to that disease.

It becomes necessary therefore to describe these irregularities, and, as far as possible, to explain them; though I must limit myself to what I have seen, and to my own powers of explanation; finding no assistance whatever from the writings of others: not even a single case, such as I have fortunately been able to extract on some of these subjects, from authors, in support of my own views.

It happens that the fits of palpitation are interrupted, as I have just remarked; and the analogy, in this case, will be found in those intermittents where the common paroxysm is similarly irregular, or where there is an intermixture of numerous cold and hot stages in one paroxysm. If there are two fits in a day, it may be a double quotidian form, such as I have just described; while it is plain, that if regulated by the other complicated types of intermittent, there is scarcely an irregularity which it may not exhibit. If it is irregular in ways not reconcilable to those cases, its analogy will still be equally found in those chronic intermittents which consist in irregular returns, of an endless variety; while, if only occasionally produced, and by some cause

inducing debility, irritation, or perhaps mental affections, we have precisely the same appearances in the common chronic intermittent. And thus, in fact, do the fits of palpitation frequently occur, in patients who have been infested with chronic intermittents; single attacks, lasting perhaps for a few hours, not to recur for some weeks or months, and often traceable to a marked cause.

I will not extend this class of irregularities, nor need I dwell further on this analogy as affording the explanations. It is obvious that there may be others, if I have not seen them; but the physician in possession of the grounds of reasoning can rarely be at a loss in explaining them to his own satisfaction.

One other mode and cause of irregularity must however be pointed out; because, while it is needful to be known, it belongs to the proofs of the nature and cause of this disease. In this case, when the palpitation disappears, it is to be replaced by some other local symptom or anomaly, or else by a perfect intermittent, or by some irregular and partial form of this. In practice, here, the error is to suppose that the palpitation is a disease of itself, distinct from the others, be those what they may; that the patient, for example, has a disorganized heart, and an

intermittent also, or some other disorder, or that the whole are symptoms of some nervous disease. A more careful observer, or one at least who is acquainted with this subject, will however perceive that if the palpitation yields to an intermittent, it is because the disorder has changed its character; or that if vomiting, or hysteria, or diarrhea, or any other of the symptoms so often mentioned, appear when this retires, it is because the local action of the chronic intermittent has taken a new direction. And thus, by watching, does he learn to explain what appeared to him under a false light, and to regulate his practice accordingly.

The other class of irregularities occurring in these palpitations, demands a different explanation; since, as far as I can perceive, these do not admit of one from any analogy deduced from intermittent, while they seem to be illustrated by what occurs in the other local and similar affections, or in common Neuralgia.

They are all referable to the effects produced by external or adventitious causes, such as exercise, position, or any thing which may interfere with the ordinary actions of the heart. Thus, while a fit of palpitation can sometimes be removed by various means, so is it irritated, or

augmented, or prolonged; while these facts tend to mislead the practitioner as to the imagined cause and nature of the disorder, as they may also afford arguments to those who are unwilling to admit the explanation which I have here given. I may state the most extraordinary case of this nature which ever occurred to me; because while it had been determined that organic and incurable disorder was present, it vanished suddenly on the appearance of an intermittent quotidian, which was soon afterwards cured.

In this case, the patient had no relief from the palpitation, which was both incessant and violent, except in the erect posture, when awake, while it returned instantly on sitting down, and while, frequently also, it could be removed only by walking about the room, in which manner he was compelled to pass nearly the whole day. Thus also, at night, was it instantly produced by attempting to lie down; so that the little sleep that was procured, and not till after urgent necessity, was to be obtained only by being bolstered up as erectly as possible.

It appears to me that the explanation, here, is to be derived from the analogy of common Neuralgia, where it is well known that external irritation will prolong or re-excite the fit of pain, as

it is notoriously also increased and prolonged by exercise or use of the affected part, as happens in a very marked manner in sciatica, and as also occurs in the "Tic" of the face on attempting to eat.

I perhaps need scarcely now suggest to medical readers, how easily a disorder of the heart of this character might be confounded with that affection which Dundas has described under the term Rheumatism of the Heart. The symptoms, ostensibly, are the same, and may, in every respect, resemble those which he has described, even as relates to their violence ; since, in reality, scarcely any conceivable appearances of disease could exceed those which occurred in the case that I have just described, or any variety of distress and of feelings as to the patient, or of symptoms to the practitioner's observation, be produced by the uttermost disorganization, which did not occur in this case. And it is also plain, that the fact of the occurrence of a local, or, as it happened also in this instance, of a more general chronic rheumatism, alternating with such an affection, or preceding, or following it, while both were but localizations of the chronic intermittent, would tend to confirm this error, and possibly, lead to considerable evil, in consequence of a mis-

application of remedies. Nothing can however be more plain, than that the disease recorded by Dundas is of a very different nature, as the dissections prove; while, respecting the present, equally violent in apparent character, and rendered singularly deceptive also by the concomitant circumstances, there can be no hesitation; inasmuch as this patient survives after twenty years from the attack. And while I suspect that the disorder which I have described has actually been often thus mistaken for this far more serious disease, as it assuredly has for organic affections of the heart generally, I cannot help suspecting, also, that the case recorded by Pemberton, and appended to the descriptive paper in question, had actually been one of this nature; though more willing to leave that to the discretion of my readers, after they shall have compared the facts there narrated, with the description which I have given of the palpitation dependent on intermittent.

Before quitting this particular case, I may yet remark, how easily the impression made by the record which I have here examined, may have assisted in impeding a proper inquiry into the nature of this disease as I have

described it. It is sufficiently apparent also, how error would still be produced by a partial observation which, while it saw that this palpitation alternated with rheumatism in some external muscles, should not perceive that it alternated also with other affections, as I have just pointed out; and further, did not remark that this rheumatism was itself a periodical affection belonging to intermittent, or a species of Neuralgia. On this I shall speak more particularly immediately; but it will now be plain, how much the views here held out simplify the whole history of these disorders, by assigning one general cause productive of numerous local actions, and generating diseases therefore which depend for their visible characters on the peculiarities of those organs: diseases misleading those who look only to obvious symptoms, or are unhabituated to philosophical generalizations and abstractions.

The proofs of the truth of the view of these palpitations, thus given, are now sufficiently apparent not to require a formal enumeration; but on this subject I will sketch one case, because it was in itself such as to include almost every one of these variations. If I have avoided loading this essay with ordinary cases, I must still claim

the privilege of describing such as offer illustrations, which, while they are perfect, can be comprised within a small space.

In this patient, the palpitation was of the most severe character, and had lasted for some months, occupying a large part of every day, or recurring in successive fits, but without any great regularity, and always increased by irritations of various kinds. It was of that kind and character which seemed to justify the belief in an organic disease, as far as this ever can be conjectured: while there were no marks of temporary fever, or of any other derangement, to be traced, and while the patient was even robust, and, when not suffering extremely from the fits, capable of all the usual occupations of a very active life. After much cross-examination it was discovered that he had for many previous years been subject, annually, and nearly always at the same periods, commencing with the end of summer, to different diseases; being in one season, periodical toothach, in another diarrheas, in a third rheumatism, and in others, anomalous affections of the urinary organs, dyspepsia, hypochondriasm, pulsations of the aorta, and further, to a marked, though a very slight, quotidian intermittent. Thus was my judgment of the true nature of the

disorder formed, while it was confirmed by the further progress; as it afterwards disappeared almost suddenly, to be replaced by a periodical rheumatism of the deltoid muscle, which was succeeded by "*tic douloureux*" or Neuralgia of the face, and, in succession, by quotidian intermittent and other Neuralgias; that patient having in himself exhibited a perfect nosology of all the anomalies of chronic intermittent, of which this very marked and independent palpitation was one. And if this is one of the most perfect cases which I have met with to prove the cause of such palpitations, so does it afford a marked evidence, to be confirmed hereafter by much more, of the nature of all the Neuralgias, of their common connexion, and of their dependence on intermittent or their origin in Malaria.

I may thus conclude the account of what I wish to call the Neuralgia of the heart; an account which I might have prolonged, and also illustrated to a much greater extent, had I chosen to make of it a separate essay, instead of considering it a symptom of intermittent, or a local variety of one general disease. But if I have judged it rightly, what more might have been useful for its illustration will be deduced from the general and particular accounts of the diseases

with which it is connected, since it is here a variety and not a distinct species : while in an essay embracing so many things, I could not justly have suffered it to occupy more space. I shall only further remark in conclusion, that it will sometimes be found in patients where the existence of glandular visceral disease is to be suspected ; a condition which confirms this view of its nature, while it is also one which, under mistaken views as to the disorder of the heart, is apt to mislead the practitioners into the belief of organic affections of a far different nature. Of the methods of cure I need not here speak, as they belong to the general character of the whole disease : but it will now be apparent on what principle it is that tonic medicines act in removing palpitation, as they also do in many of the nervous and mistaken affections so often originating in the same general cause.

It is not within my plan to inquire into the other causes which may produce palpitations of the heart, as there are unquestionably many ; it being sufficient that by separating this particular kind, I shall have diminished the difficulties in which the whole subject is entangled : and here as elsewhere, I request distinctly to repeat, that while in many other cases than this, I have re-

ferred diseases, or apparent diseases to chronic intermittent, I am not so blinded by one view of causes as not to admit all the others which physicians have assigned to such diseases, however, in individual cases, I may disagree with them, by choosing the cause here under discussion where they may have selected another. It would indeed be to encourage and perpetuate the evil which has so much retarded the progress of physic, to indulge in such ravenous hypothesis, and in prejudices so unworthy of philosophy, or even of the pretensions to it.

I must not however quit this anomaly of the intermittent, or this local direction of the diseases of Malaria, without pointing out another affection of the heart which I have observed in intermittent. It is probably a rare one, and therefore the less deserving of notice; since, in my own views at least, the rarer cases in physic are of infinitely less value than even the most common; while they unfortunately possess the same attraction for the multitude as the history of monstrous productions and other accidents or mysteries, has ever done. It does however demand notice, because it may possibly be more common than my experience has induced me to think: and, as to know that such a symptom has

been recorded, may not only lead to the observation of other such cases, but afford that relief, both to the patient and practitioner, which always follows from knowing that even what is mysterious is not solitary.

If I were bold enough to give a violent term to this symptom, I should call it a palsy of the heart; a paralytic affection rather, or a diminution of energy, corresponding to that similar effect which occurs in all the nerves that have been unduly excited by the active or painful state of Neuralgia. And, in its own system it presents an analogy to that singular condition of the circulation so often occurring in the chronic intermittent, when the pulse subsides from its former hard, contracted, and irritated state, so as to become slow, feeble, and languid; diminishing, as I have sometimes seen it do, from a hundred and twenty with extreme contraction and asperity, down to fifty, as if from the effect of digitalis, and with correspondent languor and compressibility.

It must in reality be plain, that under this state of the circulation, the powers of the heart are diminished; though the effect may not be so extensive as to be sensible to the patient, in the

form of a feeling in the heart itself, sensible as that organ is in other respects : and it is therefore easy to see how a material increase of this debility may produce the more serious symptoms which I must now describe ; a diminution in the energy of the heart as the prime mover of the circulation, so considerable as to be sensible to the patient in the organ itself.

I have but one case, from observation, on which I can rely, and as I cannot therefore generalize, I must describe it. In this, there was a quotidian, of a chronic nature, in which some of the relapses were as severe as any original disorder could well have been ; while the obvious character of many of them was rather that of remittent, so long were the paroxysms and so imperfect the intervals. In this case, when the active state of the circulation was past, there succeeded a slow one, as just described ; but so great was the loss of power in the heart, that it generally required a voluntary effort on the part of the patient to maintain the pulse, while that paralytic state, if it may be so called, was, throughout the whole disease, proportioned to the severity of the paroxysm or of the fever. The suffering was extreme, even frightful ; as the sensation was al-

ways that of imminent or immediate death, and of death which nothing but a strong exertion, both of the mind and body, could have prevented.

Thus it was necessary for the patient to move his limbs to maintain the circulation; while on remaining immoveable even for an instant, the sense, with the agony, of instant death immediately occurred; continuing during the whole period of this condition of the heart, and thus often lasting for even twelve hours in day. In a similar manner, this occurred on any attempt to sleep; while as the paroxysm was also attended with coma, the whole day was passed in a constant succession of struggles between the act of falling asleep and that agony of death which immediately aroused him to new motion.

It was further remarkable, as proving the necessity of some foreign stimulus to prevent the absolute quiescence of the heart in this case, that when it did not stop merely by keeping the limbs immoveable, it immediately subsided on shutting the eyes to exclude the light; the pulse gradually disappearing: while on those trials, the patient often fell into a coma and appeared to be in the act of death. Nor must I omit to mention, that the revival of the action of the heart after this almost dormant or feeble state, or the restoration

of the circulation to its former condition, was attended with great suffering, particularly at those times when the pulse had previously almost disappeared: the patient describing his feelings as if currents of melted lead had been flowing through all the veins and arteries of the body, and this universal pain lasting, though gradually diminishing, till the pulse had regained its former strength.

Nor was this a mere nervous sensation or a deception of the imagination. On desiring the patient to remain immoveable, the pulse, as I have just hinted, became gradually slenderer, till, even in a few seconds, it was reduced to the size of a thread, becoming finally insensible; at which moment the agony became insufferable and the patient generally started up under the sense of immediate death. It was supposed by the other attendant physicians, that actual death might have ensued, by a voluntary effort of this kind, or by a steady resolution to remain at rest; and considerable alarm was consequently excited by one or two trials that had been pushed too far: but I know not if this actually could have happened, from the excess of the apparent agony, though it was obviously an experiment that was not to be tampered with. It was remarkable at

the same time, that when the worn-out patient did really fall asleep, the pulse, after subsiding during the attempts, which were often greatly prolonged till the very instant of slumber, gradually recovered its size. I have only to add respecting this state of the disease, that the patient was himself convinced that he could put an end to his existence by stopping the motion of his heart: while he gave proofs of his power over it, by an effort described as a voluntary command to it to cease to act; illustrating a solitary case already well known in the records of physic, that of Colonel Townshend, but in which, after some such demonstrations, death was the actual consequence.

It may be useful still to add respecting this case, and particularly as this most distressing symptom is more likely to exist in a moderate state than in one of such excessive violence, that the patient continued for some years subject to relapses of the same fever, almost indeed to a continuous chronic state of it, but in a more moderate degree; and that, during the whole time, he never passed into the state of sleep without undergoing the same agonies, as of instant death, often repeated from minute to minute, even during many hours, and frequently so

threatening and so insufferable, as to compel him to rise, under the insuperable conviction that the attempt to sleep was to die.

If I said that this case was a solitary one, I must presume that this proceeds from my own limited experience, as I cannot doubt that affections of the heart, more or less similar, must be common wherever intermittent is endemic; and also, that among the numerous, and often singular cases of Palpitation occurring every day to practitioners, there must be many owing their origin to this same cause, if perhaps no two cases can appear under the same precise aspect and character. This will be ascertained when practitioners shall hereafter re-examine their cases of this disorder under these new views: when Neuralgia shall become really understood as it demands, and whenever also intermittent, and especially under these irregular forms and substitutions, shall be known to English practitioners as it never yet appears to have been.

But there is a case of no uncommon occurrence which appears to me to be connected with this last variety, or to depend on what I have called a paralytic tendency, or loss of energy, in the heart; though a mere shadow, in point of strength or effect, compared to the one just de-

scribed. And if I might have noticed this vexatious, and reputedly nervous symptom under the paragraph allotted to the mental affections, it will perhaps even better find its place here, because I believe that the mental affection, though it is the ostensible symptom, and that of which the patient alone complains, is purely dependent on this very state of the heart, or on a loss of energy consequent upon the previous excited one which appertains to an intermittent paroxysm.

The ordinary complaint of patients in this case, is an unaccountable sense of fear, rather than of anxiety, but sometimes of both united, coming on at some period of the day, but very generally at night, and, above all, upon the first attempts to sleep. And this sense of fear is described as being sometimes so violent or perfect, as to produce that trembling in the limbs, which notoriously attends this passion, although the patient is on his bed, and can assign or discover no cause for fear. Yet, as might naturally be expected, through the principle of association, reasons of this nature must often make their appearance, since there are few who cannot find something to fear; while the whole train is very generally called up by the bodily sensation, to the infinite annoyance of even the patient who is aware of

the cause, far more of him who is not metaphysician enough to discover the solution.

Now, as far as I have examined such cases, I have found them to depend simply on this condition of the heart, and that they have occurred on the attempt to sleep, in those whose previous day had been occupied by a paroxysm of chronic intermittent. And it has been equally easy to perceive the diminution of the pulse, which, as in the former case, followed the attempt to sleep, or the act of falling into the state of slumber, and to see that the sense of fear was proportioned by this, and produced by it. I shall only add, as to this very vexatious complaint, that I have sometimes had reason to believe that it had become in itself a distinct and independent habit, though originally the attendant on an intermittent; or that, without any mark of a diurnal paroxysm, this paroxysm of diminished energy in the heart, with its accompanying fear, had become an habitual and periodical disease.

As I have noticed the occasional connexion of the Neuralgia, or intermittent, of the heart with rheumatism, I may proceed to treat of that disorder in as far as it belongs to this class of diseases; being almost as unable to preserve any regular order in these anomalous modes of inter-

mittent, as I am unwilling to appear to prejudge a disputed question, by adopting what I should consider a better arrangement. If it is thus awkward to separate what is called the rheumatism of the face from other local or periodical affections of the same kind, I could not well have divided that from the Neuralgia with which it is connected, as I could not, equally, in the present state of this inquiry, have ventured to arrange all the affections which I have here brought together, under the head of Neuralgia.

The theory of rheumatism in its various forms, is at present almost as obscure as that of any disease in the catalogue; and considering its familiarity and apparent simplicity, the fact is not very creditable to physicians. It is not my office here to attempt to rectify it; but I must endeavour, as well as I can, to separate those modes of this disorder which arise from intermittent or are connected with it; though, from the erroneous views of practitioners on this subject, and the obvious prejudices or ignorance under which the disease is so often described, and under which cases of it are misrepresented rather than represented, it is extremely difficult to disentangle this subject.

If the ordinary division into the acute and

chronic rheumatism is a very lax one, and if additional confusion has been brought into this subject by classing under this general term other painful diseases of the joints, I trust there will be no difficulty in showing, that, under each of these first leading heads, and probably also under the third distinction, ill understood as that is, there will be found cases that belong to intermittent, that are superfluous symptoms of the chronic variety, or misdirections, or anomalies ; cases bearing an analogy to certain modes of Neuralgia, and possibly differing from it, as to the immediate cause, by the affections being seated in the numerous and minute ramifications of a nerve, instead of attacking a trunk or a leading branch ; while a peculiar species of inflammation is thus also excited, as happens in other cases hereafter to be described in their proper place.

The most simple case of all, while it is one that ought never to be mistaken, is that where a rheumatic pain in some particular muscle is strictly periodical, returning and ceasing in regular paroxysms. In such cases, the part affected may sometimes be exceedingly limited, occupying only a few fibres of a muscle, though, even then, the pain is often severe ; while in others, the extent may be very considerable. Thus even the

whole body may suffer under it ; or rather there may be so many different muscles affected, in some place or other, that scarcely any movement can be made in which some one or more of the disordered portions is not brought into action ; conveying thus, to the patient, the feelings as of an universal rheumatism.

If such a periodical recurrence is not sufficient to satisfy a practitioner respecting the true nature of such a disease, it will often be found attended with other symptoms explanatory of its cause, while these also form the proofs of the propriety of thus considering and arranging it. Thus it will be found to occur in persons who have been, at other times, affected by intermittent : forming, in itself, a period of relapse, and a substitute for the more common modes of the chronic disease. In other cases, the rheumatic pains will alternate with any of the other marked symptoms belonging to this disease ; as, in the case last described at so much length, it does with palpitation of the heart. Or it may cease on the appearance of the common symptoms of intermittent, or the patient may recollect that it had formerly existed and suddenly disappeared ; without apparent cause, or from change of place, or from the action of feeble or fantastic remedies. And hence,

I may remark by the way, it is, that so many absurd or imaginary remedies have gained credit in rheumatism generally; as it is the character of intermittents thus to cease of their own accord, or to yield to trifling changes, or even, as is abundantly notorious, to give way to remedies acting on the imagination; even to charms.

But the physician of observant habits, and who has really studied the diseases under review, can seldom be at a loss to discover collateral symptoms or appearances, sufficient to enable him to determine the real nature of such rheumatisms; while, for me to detail all these, would be to repeat what I have already explained so largely, and while I ought to trust, that after all that has here been said, not only this variety, but all the others which remain undescribed, should be intelligible with little further explanation. One remark however I will repeat, because it is on a circumstance almost always overlooked, and yet one of the most explanatory of all that occur, not only in this case, but in every disorder that I have ever yet seen depending on this cause. It is the physiognomy of the cold stage, never absent at some period, however wanting the actual feeling of cold may be; and which has, on endless occasions, enabled me to pronounce, from

the first sight of the patient, and even at a distance, on the nature of a disorder to which I had been summoned, with the assurance of its mysterious nature, and a confession of inability to discover it, on the part of the previous medical attendants. I ought however to remark, that the power of distinguishing this physiognomy, never to be mistaken for any thing else by him who has once known it, however slight it may be, belongs, if under a different sense, to what physicians call the *tactus eruditus*; while I have reason to think the circumstance cannot be much known, inasmuch as I have not found practitioners aware of it, except when accompanying an absolute fit of ague, and have often had much difficulty in convincing my casual associates of the fact, or in making them indeed perceive it when pointed out.

I have here stated a very simple case, that of a marked periodical fit of pain, with an interval more or less perfectly free from it. But as I have shown that the other local or peculiar disorders, or anomalous forms of intermittent, may be irregular in various modes, just as even the pure disease often is, it is evident that this may also be the case with the rheumatic affections, though I need not now repeat what those varia-

tions are, nor the analogies by which I explained them before. It is only for the reader to recollect what has already been said on this subject, to perceive that a rheumatism may be truly a modification of the intermittent, under any irregularity, and even while it may seem continuous; since this happens in the simplest quotidian fevers of this nature.

But to detect their true character in these cases, becomes more difficult than to discover perhaps that of most of the other anomalous intermittents; not because of any greater inherent difficulty, but on account of the prevailing prejudices respecting rheumatism, as if it was always an original and distinct disease: a difficulty which will always, and obviously, occur in the great majority of cases, because the great proportion, in physic, must always be routine practitioners, guided by symptoms, and can be nothing else. To such persons, it is impossible to give any further aid, or directions that will meet every case: observation and reasoning are what are required; to discard words, and rules, and receipts, to govern themselves by analogy and induction, and to learn, if that be possible, that he alone who is a philosopher will ever be a physician.

It is plain that, under those ordinary and current views, the cases to which I have here been referring will generally fall under the division of chronic rheumatism, as the symptoms in question are the produce of a chronic disease. I do not pretend to enter into all the possible causes of chronic rheumatism, nor to conjecture what proportion of the cases which occur, be they local or more general, may be original diseases of a distinct nature, and what comparative number may belong to the cause under review. But it is probable that the latter cases do form a very large proportion of the chronic rheumatisms occurring, and that we are thus enabled to explain their inveteracy of duration, as well as their tendency to recur; properties of all the disorders arising from this cause: while it will also explain the action of the modes of cure that are successful in this disease. Hereafter possibly, physicians may be induced to examine this disorder with more care, and by this light; and we may then perhaps approach somewhat nearer to a true view of a disease, of which our ignorance has hitherto been so disgraceful.

It is not difficult now to see, how a case of this nature might be mistaken for an acute rheumatism of an original and independent character,

or considered as such ; since the limits between the two modes of rheumatism are not, in all cases, and in the popular estimation at least, very well defined. A very acute or painful case, or one affecting many muscles, might be considered an acute rheumatism ; and should it terminate within a limited time, that opinion would be confirmed ; while it is plain that this might happen though it were a dependence of intermittent, since it occurs in the simple intermittent itself.

The more serious question remains ; whether that which is esteemed acute rheumatism, a disorder too well defined and too familiar to require description here, may be a mode of intermittent. I do not mean to suggest at present, that every acute rheumatism is a disorder belonging to this class of diseases, or that, as in the chronic variety, there are not cases which are independent disorders, or affections generically different, although it seems to me, that even this is a question far from decided the other way. The question at present is, whether there are not acute rheumatisms of the most regular form, which are truly modes of the quotidian intermittent, or of the remittent, possibly, originating in the same causes : and if it shall be decided that this is the fact, and that there is also an acute rheumatism generically

different, then we shall probably be able to explain the causes of the contests so long maintained respecting the use of bark in this disease.

The facts which would seem to prove this opinion, are chiefly these. There is a periodical exacerbation, if there is not always an absolute remission of the pains; and the duration of the disease is very analogous to that of a remittent, or of one period of an intermittent. The causes correspond, if they are not identical, while the remedy is often the same; since, after all that has been disputed, there is no doubt that many cases are cured by bark, and that bloodletting is not only often ineffectual, but pernicious; its action altogether, being, in fact, very similar to that which it exerts on remitting and severe intermitting fevers.

Thus while, in acute rheumatism, the misapplication or abuse of bloodletting often produces the chronic disease, so does a similar practice frequently induce the chronic state of intermittent, or convert an acute and terminable case into a durable one. It is not impossible also that the termination of the pains of acute rheumatism, succeeded by affection of the brain, and so often producing death, may be an analogy to what happens in other cases of intermittent diseases,

where one local affection is exchanged for another, or disappears to be replaced by an augmentation of the general fever: while I can further easily understand, that the misapplication or the injudicious excess of bloodletting in such a case, may absolutely produce that comatose state which sometimes occurs in this disorder, and which is so generally considered a transference of the inflammation; since this is the very apoplectic state, if I mistake not, which is produced in the same manner in remittent and intermittent fevers. With what propriety therefore bloodletting is resorted to in the cases of this nature, will be abundantly palpable, should this view be but even sometimes correct.

A priori, there seems no reason against this view, whether it shall be borne out by a stricter and fuller examination of evidence or not. If an intermittent of a chronic and slender character can produce, or find its substitute in, a rheumatism of similar qualities, so it is not unreasonable to suppose that the localization, in a corresponding manner, of a severe intermittent or remittent, may produce the acute disease of this nature. And there is abundant analogy besides, in support of the same views, from the various and truly acute inflammations, as far as rheumatism

itself is such, which occur so often in remittents and intermittents, in certain seasons or epidemics especially, and of which, histories abound in authors, though my plan excluded them. Such are pleuritic and catarrhal affections, anginae, hepatitis, inflammatory affections of the stomach and bowels and of the spleen, as well as, further, of the brain, and even more ; and such is that severe though peculiar ophthalmia which I have been compelled to arrange in another place ; while, were more decided facts wanting, it is fully shown by many foreign writers, that this very disease, an acute rheumatism, is one of the symptoms of such fevers, since it is from this very variety apparently, that the Arthritica of Sauvages has been formed. Let the fever be obscure or irregular, or let it be absorbed by the attention to the local disease, or let the physician be inattentive, or have predetermined his theory, and there will then cease to be much difficulty as to this question, or as to the facility with which the error of supposing the acute rheumatism a primary and independent disorder may be committed ; though the extent of its bearing and value must be reserved for a much more ample investigation : yet for one that must be conducted by persons

willing to believe that they are still ignorant and have all to learn.

And let me add while on this subject, that when Morton asserts that the pains in acute rheumatism were often removed by emetics, when he describes distinct tertian as well as quotidian rheumatisms cured by bark and opium, and when he speaks of the "*Febris intermittens rheumatismum simulans*," he offers a strong testimony, with respect at least to the frequent existence of a rheumatism of this nature; as, I have little doubt, does Haygarth's well-known report. As to the rheumatism of the joints, as it is called, a disorder which, like the former, is, as far as it is intermittent, much confused by the ancient authors, in consequence of a vague use of the term "*arthritica*," we have also the modern testimony of Wardrop respecting the utility of bark as a remedy. But I will not venture further on this conjectural ground: it is sufficient if I have thus pointed out an important field of inquiry; while the determination must finally rest on evidence, but on evidence to be sought and weighed in a manner which we could wish to be much more common in physic than it is.

If I have said all that appears necessary in a general view respecting the connexion of rheuma-

tism and intermittent, it is still necessary to point out varieties, depending on the parts which happen to be the seat of the pain. It is not because the general principles do not apply equally to all, that this is expedient ; but from the experience that these have no influence with the mass of practitioners, whenever any thing remarkable in the place of the disorder, or the obvious symptoms, lead those who have no other guides than words and symptoms, to refer them to some familiar disease, however different the real nature of that may be. If, in such hands, every acute pain in the chest is a pleurisy, it is easy to see what the consequences may be ; and as this is, as far as I have seen, one of the most common of all the errors on this head, I shall bestow the first place on it.

To say that rheumatism of the intercostal muscles is perpetually mistaken for pleurisy, in the hands of negligent practitioners, is to state a fact known to every observing physician ; and it must equally be known to many, that the practice of bloodletting, always resorted to under this mistaken view, is very often to perpetuate or render chronic what, under correct treatment, might have subsided in a short time. If I have seen constitutions utterly ruined by a perseve-

rance in this wrong practice, if I have seen patients condemned to believe themselves labouring under consumption in these cases, with all the expensive and vexatious consequences that follow such an error, there are doubtless many physicians to whom the same facts have occurred. And though it is out of the bounds of the present inquiry, I cannot proceed with the subject, without observing, that even in decided cases of pulmonary inflammation, it is not uncommon for patients, and particularly after much bloodletting, to be seized with acute pains of the intercostal muscles, interfering with respiration; and which, in careless hands, very often, perhaps very generally, lead to the repetition of this remedy, when, in reality, it is not only useless, but has become highly pernicious. To distinguish these pains from internal inflammation, is most important: and it is often to be done easily by merely pressing hard on the painful point, which, it is well known, removes or suspends for a time a rheumatic pain.

Having stated this common fact, I am not, of course, about to maintain that every rheumatism of the intercostal muscles belongs to the intermittent; but I have seen many such cases where there could be no question on that subject, and

where the most serious evils have followed the erroneous view and the wrong practice. If I state one case, as briefly as I can, in illustration, it is not only because it offers a good specimen of what is very common, but because there are facts in it which will illustrate this class of cases better than a general statement could do.

The patient was a young man in the higher rank of life, and the pain in the side was termed pleurisy, though no cough was present, and very little fever; so little, that not even confinement to bed was necessary. Bloodletting was resorted to, very actively, and was followed by increase of the pains; and, not to prolong a tedious history, these pains continued or returned occasionally, during nearly a whole year, while, during all that time, this remedy was repeated, often, many times in a week. If it was plain that this, by merely negative reasoning, must have been a rheumatic disorder, there was even much plainer evidence, in the periodical returns of the pain, after some weeks, that it was also the intermitting disease; while the physiognomy and appearance marked, once in every day, a decided cold stage. Still further, after about five months, there came on a pain in the shin-bone of one leg, regularly periodical, and lasting five hours; during which the

rheumatic pains among the ribs diminished or ceased, yet without leading the physicians to a correct judgment of this case, as it ought to have done ; being a true Neuralgia, interchanging partially with the original intermitting rheumatism. And if, in the present stage of this essay, the explanation now given may appear unfounded or unintelligible, there will be abundant proof, in the following volume, that this view is a just one, and that analogous cases also are very common : this very class of facts, in reality, constituting one of the essential and characteristic circumstances of all these diseases. So far, however, were the attendants from even conjecturing the cause or nature of any part or form of this merely varying, but identical disorder, that, although there was, at this time, not only a regular cold stage, but the comatose state of intermittent, lasting daily for some hours, the disease was then reported as a wonderful and mysterious case ; until at length it was actually proposed to make an incision through the periosteum, into the pained part, on some theory of a disease in the bone ; though nothing was to be felt. This, I have in reality known to be done, in a parallel case ; while the patient here fortunately escaped this evil, by the sudden cessation of the pain ; very

possibly the consequence of the alarm, which so often removes Neuralgia.

Not to proceed further as to this case, I shall only add, that as has happened in every similar instance of mistreatment that I have seen in these disorders, the patient's health was so much injured that he did not recover his strength during many years, never regaining his colour; and that while the chronic pains in the ribs recurred repeatedly, to be always treated in the same manner, there supervened spasms of all the muscles, with affections of the intellect, after one period of very severe treatment of this nature; and, at length, a marked period of the disease so long present under other modes, namely, a regular quotidian, which lasted nearly a year, and which, for aught that I know, remains uncured. If I must apologize for the length of this case, it will be not without its uses, as a very complete specimen of neglected evidence, of error and maltreatment, and of the consequences of this last; which are those that for ever follow under such erroneous practice, if in different degrees.

If the case that I have thus described was a quotidian, there is no evidence wanting respecting the existence of tertians of the same nature; though it is not from them, but from an acute

disease, probably also different, that Sauvages has derived his variety the *Tertianæ pleuritica*: and I need scarcely remark over again, that any one of all the anomalies that I have described, or shall describe, may also be found under the quartan type, or under those complicated forms which I have not chosen to dwell on. It is plain that, in the latter cases, the chance of error on the part of a careless or uninformed practitioner, is even greater; as the want of a very simple and fixed period, will deprive such a person of the most obvious criterion of the disease.

And I ought to make another remark here, though it has been occasionally noticed for other purposes, elsewhere; since it not only concerns these cases of rheumatism, when chronic, but many more of the simulating diseases of this connexion or genus; and because it is from ignorance of this common fact, or from inattention to it, that the characters of these disorders are, partly, mistaken, and, further, disputed or denied; or that the difficulty arises, of convincing persons who have not bestowed attention on this subject, and are unaware of the facts which constitute the very basis of this work, that such diseases do really belong to intermittent, and are but modifications of it; requiring the same treat-

ment, and, in truth, scarcely ever to be removed in any other manner. This is, that in all ancient and inveterate cases of even simple intermittent, it is common for the disorder to become so very irregular, that nothing but great experience of such cases, or an accurate and philosophical knowledge of the disease as I have attempted to describe it, can recognise it, under that form, or even perhaps believe that it is the intermittent fever. Not only does it vary in type, in every mode, or cease to have any type at all, but it may recur in a single attack, or in two, or in any number, separated at irregular intervals, or, on the contrary, become absolutely continuous, or, in short, appear under modes of variety and confusion which are best left to the imagination to conceive. Thus also may it put on more forms than one: or what is a simple fever on one day, or through one week or month, may be an inflammatory affection, or a merely painful one, on some other occasion; such disorders even interchanging with Neuralgia, as I shall more fully show hereafter. Thus it is easy to see how, if the case should be a rheumatism, these irregularities, united to the common theory respecting this disorder, would confound the judgment of

the practitioner, or render it impossible to convince him that a disease so irregular could possibly belong to an intermittent type.

As to the true pleuritic intermittent, an acute disease under a severe fever, I have no experience; and I may therefore refer to the nosologist above named and to foreign authors, for what has been fully described; whether I am convinced or not, that, in these cases, the lungs being unaffected at the same time, the local disorder has been aught else than a severe rheumatism of the same parts. Yet with regard to a pleurisy of a perfect character, and possessing every symptom of the ordinary disease of this nature, but depending on intermittent, and often also, itself periodical and intermitting, in tertian as well as quotidian forms, there ought to be no doubt; since Morton says that he had seen a hundred cases, and that, like the fever itself, they were cured by bark, and by nothing else. It might possibly be supposed that such cases were sometimes the mere rheumatism of the intercostal muscles which I have described; but Morton is too good an observer to permit us to draw this conclusion universally, while there is no reason why an inflammation of the pleura itself, or even

of the lungs, of this peculiar character, should not occur, as well as that of the eye or of the stomach and bowels.

Of other rheumatisms affecting particular muscles, possessing the character of intermittent, and being modes of that disease, I think it unnecessary to point out particularly any other than that of the loins ; as this also is one of those which, having a name of its own, the lumbago, is very generally misapprehended, or perhaps almost never referred to the disease of which it is, sometimes at least, a modification. There is abundant evidence of its being often what I have now stated it to be, though, how often, I cannot here pretend to say ; and if the evidences are similar to those already enumerated, I can add one very pointed case, where a disorder of this kind, particularly well marked, and long treated as a common lumbago, was suddenly and spontaneously removed, and immediately succeeded by the common Neuralgia of the face. There is also, if my reading has been duly remembered, a similar case recorded by Dr. Pearson ; and I prefer any one's testimony to my own, when I can find such, because I am the more sure that there is no bias, or at least, that it will not be suspected : as it very naturally

must when the promulgator and supporter of the theory is also the observer of the evidence.

I might now consider those rheumatic pains, as they are vulgarly considered, which are found occasionally in places not muscular, and which may occur in almost any part of the body. But the term rheumatism is assuredly here misapplied, under any view: while there are many reasons for associating many of these disorders at least, with the Neuralgia in its more common form, and thus deferring them to the latter part of this essay. The rheumatism of the face and of the head, as they are called, belong to this division; and as it seems much more convenient to place these with the common Neuralgia, it would produce even more confusion than I have now made, very unwillingly, if I were to describe here the affections which are precisely similar in character, differing only in the parts which they occupy. Hence some of the varieties apparently, which have been ranked under the term *Arthritica*, and which seem to me to belong to this division, will fall to be considered hereafter. Thus also will the headaches be much better treated of in the same place; on account of their obvious con-

nexion with the most definite Neuralgia of the head.

But as to a true arthritic rheumatism or affection of the joints, I have great cause to regret, that since I have thus far extended my views of the local actions of intermittent, I have had no opportunities of treating or seeing that inveterate disease of the joints, of this nature, which is so well known, and which is so much more common in the female sex than the male. I cannot therefore discuss it, nor must I even dare to suppose that it may be a disease belonging to this place: but if what I recently quoted from Wardrop as to the value of bark in it, shall prove generally or extensively true, it will present at least a strong ground for suspicion that it really does belong to the anomalous intermittents.

I must therefore pass to some other diseases of a local or peculiar nature, connected with intermittent as symptoms or modifications, however rare a few of them are, and however obscure the connexion may sometimes be; while among them also, there are some that might perhaps have been most properly ranked with the Neuralgiæ.

Of these, diarrhea at least is perhaps best placed here; though it might indeed have been more correctly arranged with those cases where

secretions are especially affected, and therefore under the head of Neuralgia. But there is always a difficulty of choice, here, in these arrangements ; on account of the different relations of any one assumed disorder, to a general, or to a local affection, or to fever or Neuralgia, as its leading genus or division ; independently of its relations to a continuous or remitting fever, or to an intermitting one : while all this inconvenience has arisen, fundamentally, from the vexatious necessity of following ancient prejudices and ill-combined systems, in treating of what belongs in reality to an arrangement as radically distinct as it is essentially new. And if I need not here repeat what I took occasion formerly to say of dysentery and diarrhea, I ought however to premise, that as far as a diarrhea depending on the action of Malaria, or on the remittent fever, is a continuous and acute disease, whether it should be accompanied by a marked fever or not, I need not here notice it again ; my object in this place being to point out a chronic diarrhea rather than an acute one, and a periodical rather than a continuous disorder ; and chiefly for the same reasons, the mistakes to which it gives rise ; though partly also that I might bring under one general view for the sake of mutual illustration, and for

the purpose of establishing the general theory, as many simulations of intermittent as I could collect. It is plain however that there is no essential distinction between this diarrhea and the more regular one formerly noticed: though if remittent and intermittent are to be separated, there are the same reasons why all the simulations under intermittent should be separated from those under remittent fever. If these disarrangements are an evil, the radical evil lies there; and, consequently, there is at present no choice: while perhaps the good may really outweigh the inconvenience, on account of the advantages arising from it in the practice as to those disorders.

The diarrhea which I purposed chiefly to point out here, is one that belongs to decided intermittent, occurring in the chronic tertian as well as the quotidian, and, for aught that I know, in many other types. If I cannot at present find satisfactory cases in authors, and if it is not noticed in Sauvages's useful work, I have seen it occur most distinctly under both the types that I have named, as a substitute for the common fit of ague; while, in one instance, which might therefore claim the name of double tertian, the one day was regularly a common paroxysm, and the other a diarrhea, so punctual in the attack as

never to fail at the hour of eleven in the morning.

So many causes may produce a chronic diarrhea, and the ordinary habits of the body, obedient as it is, in many other cases than ague, to diurnal periods, may so render such a common diarrhea periodical, that I am afraid to lay much stress on the cases of this nature that have come under my notice, or to refer them to the variety under consideration ; feeling that natural fear of being suspected of undue bias to a system and a cause, for which the whole of the views laid down in this essay will appear to have given so much ground. Yet I think that physicians are bound to consider such a disorder as possible, and as possibly much more frequent than I can prove it to be from my own observations ; while I could easily enumerate many more cases of periodical diarrheas, and, what is essential, occurring in persons who had, at other periods, been affected with chronic intermittents and Neuralgias, where this solution has appeared the probable one. And in every case of this nature on which I would lay any stress, the absolute necessity of quelling the disease by the ordinary remedies, and the suddenness with which it spontaneously disappeared on a change of place or habits, confirmed this

view ; since it is thus that all the modes of chronic intermittent behave under similar circumstances. To pass now to a very different disorder.

I need not minutely describe a species of cough which sometimes occurs ; which is not pertussis, does not arise from affections of the liver, and is not attended with any expectoration, nor apparently with any affection of the bronchial membrane or the lungs. Its common designation is, a spasmodic or a nervous cough ; and, numerically, it is more common in women than in men : while its leading character is, to supervene in violent fits, commonly with long intervals of entire freedom from even the suspicion of disease. What it may be in all cases, it is not here my business to inquire ; but that it is an intermittent disease, and sometimes of periods extremely regular, to be cured by the remedies of intermittent fever, I have often experienced.

I know not that this anomaly is ever of the tertian type, but have seen it under the quotidian, occurring at regular periods, and lasting a definite time ; while in some of the cases, it was held to be a very mysterious disorder, though in others, called by the vague term a spasmodic cough, and treated, to no purpose, by the common antispas-

modics. That, in one instance, after a long duration, and under such extreme severity in the cough, as to have produced repeated abortions, it was almost instantaneously cured by the remedies of intermittent, was to me a further proof that I had judged rightly of the nature of the disease. In another case, the quotidian regularity was perfect and definite; as the cough returned regularly at three o'clock in the morning, with extreme severity, and lasted precisely half an hour: while this patient, after many weeks of the disorder, was cured within three days by means of bark. It will be for practical physicians to review their cases of spasmodic cough, and to inquire whether some of them do not truly belong to this disorder.

There is something singularly periodical in the attacks of a catarrh which often comes on in summer, and, as it would appear, most commonly from exposure, not simply to heat it would generally seem, but to heat where vegetation is present. This well-known disorder is produced by hot-houses or green-houses; and, in the public estimation, it is particularly caused by hay-fields. Hence the term Hay fever, lately become fashionable. I do not mean to say that because this is a periodical catarrh it must be a mode of inter-

mittent, or that it is a misdirected case analogous to all the former. But having a quotidian period, and being the produce apparently of heat and vegetation, it at least presents features of analogy which renders it worthy of being here noticed, and also of being more minutely studied; as far at least as we can investigate a disorder generally too trifling to attract much notice. But, if the method of cure is not that which removes intermittents, and offers therefore no confirmation of such a theory, I may remark, as a matter of utility, that it is aggravated by the remedies which aggravate intermittents, namely, by bloodletting and evacuants, though, unfortunately for the patients, this is a common practice.

I have no experience in cases of such extreme severity as that described by Dr. Bostock, and must not therefore pretend to entertain any opinions: it must be for those who know it in such forms, to inquire further into its nature; nor could the inquiry be in better hands than those of him who has suffered from it. But I must add that while I have never had any opportunity of treating it as if it was an intermittent, I have observed that opium, and stimulants in general, including wine, formed the most successful practice; while the slighter cases, still

abundantly teasing, and conspicuously so to clerks in various offices in summer, among whom it seems to be produced by the heated air of their confined rooms, appeared to be most readily managed by resorting to the use of snuff, under which the habit also of suffering from this singular disease at length disappeared.

On other occasions, I have here shown that many of the local disorders thus described as belonging to the chronic marsh fevers, occur also in an acute form, in those of a severer character ; the one occurrence illustrating the other, and, as appears a fair conclusion to draw, confirming the probability in cases that might otherwise be doubtful. How far therefore the possibility of such a catarrh as the one I have here described, if not of the individual disorder in question, is confirmed by the frequent fact of a catarrh united to severe marsh fever, remittent or intermittent, an occurrence whence Sauvages has derived his *Catarrhalis*, I must leave to the judgment of the reader. Yet I may also notice here, what is more particularly mentioned under the head of Neuralgia, that in cases of hemicrania, itself an intermittent disease, and very often a mode of common chronic intermittent, or a substitute for the ordinary form, it is not at all unusual to find

a catarrh as rigidly periodical ; sometimes accompanying it, at others a substitute for the headach, and occupying one nostril only, with not unfrequently also one eye. I need not say that in the summer catarrh above mentioned, the eyes are frequently affected, and, in the severer cases, to a very high degree.

It might not perhaps be easily credited by those who have been little accustomed to watch the general practice for the purpose of supplying the defects of their own experience by that of others, still less by those who have never studied the obscurer forms of intermittent, that this disease has been mistaken for phthisis. Yet have many such cases occurred in my own limited experience; while the proof has been rendered complete, not merely by a narrow investigation of the symptoms, but by the success of the remedies : having thus cured, more than once, such a reputed inveterate phthisis, and even of long standing, by a few ounces of bark or grains of arsenic. And thus have I seen cases of this nature cured, often almost suddenly, by change of air, as I have seen a journey into Italy recommended on that ground : while, doubtless, successful as this remedy is often likely to be, a reputed cure of con-

sumption has been more than once effected under this error.

I know not whether I ought to consider these as cases of actual simulation on the part of the disease, or of ignorance and inattention on that of the practitioner: others must decide this point as is most flattering to themselves, should such a case have been their own. How far the symptoms are thus entitled to deceive any one, may thus be judged. The periodical fever is misinterpreted into hectic; and the debility, the thirst, the paleness and shrinking of the skin, possibly that of the vessels of the eye, the emaciation, not uncommon in such chronic fever, and more which I need not detail, have thus combined in deceiving those who forget to distinguish between a hectic and an intermittent paroxysm, and who do not recognise the very marked physiognomy of intermittent: while, should occasional pains of the intercostal muscles be present, an occurrence, as is here shown, often so striking as to lead to a belief in pleurisy, the error becomes complete. It is even more inveterate should there be cough, as may happen from visceral affections, or an occasional catarrh, which may occur to any one, or that catarrhal disease which

seems to be one of the simulations of this protean fever, or lastly that cough of habit so common in persons who indulge in this act, and not very uncommonly produced by the smoke of London in many irritable individuals. I describe here the various causes of deception which I have witnessed; while I ought also to add, that in young females, chlorotic appearances, and disorders which I need not specify, frequent attendants on this chronic fever, receive the same interpretation. If, under such circumstances, I have more than once put a stop to a sea voyage or a journey to Nice, removing also the most unfounded and serious alarms, promising the cure which was sometimes speedily effected, or, even when failing in this, as we so often fail in chronic intermittents, relieving the patient's mind, I can give no other rules for the guidance of others in such cases, than to recollect that there are such diseases as I have here described, and to exert their observation in discriminating them.

There is a disease called nervous atrophy which it would be very desirable that physicians should describe or define somewhat better than has yet been done. That it arises at times from intense and durable grief, seems ascertained, as perhaps also from sudden and severe disappoint-

ment: the disorder, in the latter case, producing its obvious effects in an analogous sudden manner, while more gradually in the former. That the disease of the mesenteric glands is thus sometimes misnamed, is also well known: but, beyond that, what is its nature and what its causes, if there be other causes, is a question yet to be solved.

Like others, I also have seen cases arising from the mental causes just named: but of all the reputed ones which have fallen in my way, whether in the practice of others or in my own, three-fourths have been instances of chronic remittent or intermittent, and, as far as I could ascertain, without any demonstrable mark of visceral affections, though where the spleen is the organ affected, it is far from easy to be satisfied of this fact. And from the hands in which I have seen such cases misapprehended, persons of the highest repute in physic, I have little doubt that it is a not unfrequent error, to add to the number of daily practical errors on this subject. Did delicacy allow me to name some of these cases, I doubt not that the reader would require little other evidence as to this oversight.

As in the case of simulated phthisis, I ought rather to call these cases of error on the part of

the physician, than that of fair simulation on that of the disease; yet the facts as thus stated will not be less useful in practice. On one of them I must however observe, very pointedly, that the paroxysm of quotidian intermittent was most perfectly marked, but that its period being in the night, the attendant physician, of the highest repute, and I may add, deservedly so, and with the advantage also of being a friend of the patient, had not perceived it after a three weeks' attendance; the nocturnal occurrence of paroxysms being a source of error which I have had occasion already to point out in this essay. I need scarcely add, that this patient was cured, and very speedily, by a change of system; since it was a fever of the most regular character and of no very long duration. In some others, the cure has been effected by change of air, and in two instances almost instantaneously; though I had, even then, some difficulty in convincing my predecessor of the real nature of the disease. How it may be distinguished, it would be mere repetition to say: but it is easy to see how the paleness, emaciation, want of appetite, and so forth, which belong to this fever in so many cases, might be thus misinterpreted by a hasty or careless observer; while, in this case as in so many

others, the term nervous atrophy is unfortunately at hand, presenting itself to the imagination of the physician, like so much more of the eternally mischievous vocabulary of physic, and thus quieting the conscience and saving the necessity of further thought or investigation. To conclude, I am satisfied, from sufficient observation, that what I have here said is not superfluous, though Willis has pointed out the atrophy which follows long-continued fevers ; since these are cases of a decided nature respecting which no error ought to happen ; though even here, it is not improbable that the disorder was, sometimes at least, that very obscure and chronic state of the original disease itself which I have described ; well known to this observer, if too often neglected by his successors.

The last of the local anomalies of intermittent which I purpose to notice, may perhaps be placed under the *quotidiana stranguriosa*, though this might perhaps, even more justly than the preceding, have been referred to the *Neuralgiæ*. It may not possibly be very common ; but having seen three marked instances of it within a very short time, and in a very limited practice, I shall not be surprised if it is not a very uncommon mode, though it will, like all the other local dis-

eases of this class, never appear so until physicians shall become more accurate observers of causes, and pay more attention to that class of disorders which I have here been attempting to illustrate.

In each case, it was easy to determine that the disorder was truly a modification of intermittent, though there were differences. In two, it was the substitute for the more common relapse; while the accompanying and characteristic symptoms were those which I have already described, and while one of the patients had been subject to different returns of it. In the other, there had been no chronic disease before; but the first attack took place in the bladder and in a very young person; while the characteristic circumstances were found in the exact quotidian and temporary nature of the returns; that patient having also been exposed to a marked Malaria. In all, I ought to add, its nature had been at first mistaken, and, in all, it was cured by altering the treatment; the last, in a very pointed manner, by a few doses of kina. If I have ranked these cases under the *quotidiana stranguriosa*, it is to avoid multiplying distinctions; but in one of them the disorder was rather analogous to that irritability of the bladder which attends what is

called its catarrh, while the other consisted in a dull pain, with a sense, as of occasional spasmodic contractions ; the urine in both cases remaining unaffected. In the third, it appeared to be merely a rigid spasm of the neck of the bladder, producing complete suppression of urine as long as the quotidian paroxysm lasted, and demanding the aid of the catheter.

I shall now terminate this enumeration of the anomalies which I have collected from my own practice, as arising from intermittent fever or its causes ; or of the modifications, if this is a better term, under which that disorder appears. I have already stated the impropriety of separating some of them from Neuralgia, and the comparative inconvenience of thus distinguishing even those that are not of the rigidly local character which would justify this precise term ; while I have stated also the reasons of expediency, the unwillingness to shock common prejudices, which has led me to adopt a division that I cannot approve. Hereafter, I may possibly attempt to suggest some better arrangement.

It will nevertheless not be useless in the present stage of this description, to give a general, though an imperfect list of the disorders which will hereafter be described, and which are so in-

timately connected with those which have now passed under review, that the separation is often as inconvenient as it is arbitrary. It will be convenient therefore, even now, that the reader should foresee what is intended respecting these ill-understood diseases.

They consist then of local headaches, such as *clavus* and *hemicrania*, and also of periodical ones; all consecutively associated with those already described under remittent and intermittent fevers, but, as it happens, distinguished in physic as independent diseases, and hence compulsorily separated here. To these, as bearing a near and similar affinity, I may here add toothach, under a variety of appearances, and the proper Neuralgia of the face, or *tic douloureux*. In other parts of the body, there are Neuralgiæ of various characters, including *sciatica*, and apparently *lumbago*, together with the frequent consequences of all those, paralytic affections; intimately connected with those already described, and with the apoplexy and lethargy fully discussed under the marsh fevers. Of inflammatory affections, the ophthalmia alone has claimed a distinct place, conformably to established custom; the analogous disorders having already been examined as far as it was necessary to refine respecting them.

This general idea may suffice; and with what has passed, it will convey a broad view of the diseases or symptoms arising either from marsh fevers or from the causes by which those are produced: sometimes palpably connected with a diurnal or periodical fever, at others less visibly so; whether from the actually inconspicuous nature of the febrile symptoms, or from the great conspicuity of the particular disorder or local effect, or from the errors and prejudices, or want of discrimination, which have erected these into distinct and independent diseases, thus tending to impede a correct observation.

The whole of this list, as it has passed and is to come, is, I am aware, a startling one, both from the number and the nature of the diseases. It is easy to foresee the criticisms to which it will give rise: no less than to foretel the remarks which will be made on the former attempt to prove a more general existence and a wider diffusion of Malaria than has commonly been supposed. I shall be accused of extravagant generalization, and of that absorbing prejudice as to a favoured hypothesis in which physic abounds but too notoriously. But every man knows whether he is attempting to support an hypothesis, or to make an induction from facts; and I

may therefore at least say that my belief is a conscientious one ; because I have spared no efforts in sifting and balancing evidence, and because that appears to me to be Evidence: while the conclusions have been drawn by the rules which I have been accustomed to apply to the accurate sciences.

Under such an impression, I should even consider it a crime against humanity not to state my experience ; though, if the proofs which I have produced and shall produce do not lead to the conviction of others, this is no cause for surprise ; because, in all similar cases, the same difficulties have been experienced, while time effects what argument and evidence never yet did, and while the most energetic opponents often become the most forward teachers of what they commenced by denying.

But, even including what remains to be described under Neuralgia with all that has preceded, and adding also what I am about to borrow from foreign authors, I do not by any means think that I have succeeded in making a complete catalogue of this class of disorders, or that I have done for this subject what some future writer may be enabled to effect, and which, whoever may attempt it will now find a comparatively

easy task ; inasmuch as the more difficult part is accomplished, and the mode of proceeding marked out. A more laborious research into cases and records than I have had the inclination to make or the means of making, may perhaps add much illustration to what I have here generalized as well as I could, and may also add some new modes, or diseases, which I do not yet know as claiming to be ranked with my own list. Thus also will a greater range and variety of practice than have fallen to my share, with greater opportunities of observation, add, doubtless, much useful illustration ; while they may confirm the present views by new evidence, and further, may perhaps add to the catalogue itself, by tracing symptoms or groups of symptoms hitherto limited to some other well-known disease, to a cause which seems to mimic in its effects so many independent disorders, and, possibly also, to be the sole cause of some that have hitherto been supposed of a widely distinct nature. But I must proceed to state what I have selected as of value in the further illustration of this subject, remarking only, that this illustration is meant to apply equally to the anomalous cases quoted under remittent, which I have so unwillingly separated from the present.

I have, more than once, stated some of my

reasons for preserving my own cases and the observations from which I have derived what I must often consider new views of intermittent, and of this subject in general, distinct from the authorities which I have quoted in their support; the chief of these being the greater weight which ought to follow from original and independent observation, and the consequent generalization of uninfluenced opinions and an unbiassed system. In addition to these, I shall only observe here, that as I should certainly no more have derived this generalization from the perusal of recorded cases than others have done before me, so, while I might have diminished the weight of my own remarks by intermixing them with the authorities which I only found long after this essay was written, I might not also have derived from those authorities the same support as I now hope to receive by exhibiting them in one unmixed mass. I shall now therefore, as on other occasions, select from authors, such facts on this subject as appear to me sufficient, while they are the most illustrative or valuable: some, among them, comprising cases which are parallel to my own, and the others being instances of simulation or anomaly which have not occurred in my own experience; and all tending, in different ways, to de-

monstrate or confirm the great importance of these views.

Sauvages, indeed, in the fifth class of his etiological arrangement, appears to promise an entire elucidation of this subject, when, in forming a list of intermittent diseases, he passes censure on those who have neglected them, holding out the cure by means of bark as being certain, when they are known. But when we inspect this list, we find a mixture of trifling refinements, consisting of mere terms, with some of the disorders in question, but with others also, perfectly irrelative; while the conviction of his want of accurate views respecting the subject is completed by the lists of diseases in some of his other classes, and by the utter confusion with regard to them which pervades the descriptive part of his still valuable work.

I will commence with a remark of Celsus, which, rather than pretend to decide on its absolute meaning, I shall submit to the judicious reader. It is, that fever is often very wonderfully an advantage, removing "*præcordiorum dolores*," "*jecinoris dolorem*," "*nervorum distensionem rigoremque*," and "*difficultates urinæ*." This is obscurely expressed; but it seems to me to imply the fact formerly stated;

that the local affections belonging to intermittent, often disappear in consequence of its assuming a more decided and regular form. When Van Swieten describes obstinate headaches as cured in the same manner, when a case of palpitation thus removed by an intermittent is described in the *Mémoires* of the Acad. des Sciences of Paris, and when Strack relates a case of asthma cured in the same way, there is no reason to doubt that these are all instances of the same nature as those which I have described; while, that they have not been thus commented on by the narrators, is a proof that they had not understood what I have here been attempting to inculcate, and that even Strack, who seems to have come nearer to the truth than any one else, from the multiplicity of his cases, had not formed for himself a definite view of the nature of anomalous and simulating intermittents. Where, further, and reversely, different authors, whom I need not quote, lest I should unnecessarily prolong these authorities, relate instances of the change of intermittent into some other disorder, and of its apparent cure in this manner, and when Strack, especially, notes an intermittent thus cured by a dysentery, the explanation is the same, and the

last instance in particular, too obvious to need one.

Such substitutions, or apparent changes of the intermittent into a new disease, have also been cured by bark ; yet even then, very often, as far as we can discover from the narrator's expressions, rather by a conjectural or empirical proceeding, than from any clear conviction of the nature of such disorders. Thus does Werlhoff name palpitation of the heart, and also rheumatism, succeeding to intermittent, and so cured.

As far as I have read, it appears to me that Cleghorn had arrived nearer to the truth than any one else ; yet if he was aware, in his day, of what I have, as I trust, ascertained on this subject, he does not express himself fully ; while, that what he has said has made no impression, is apparent from the present state of opinions ; not merely from the neglect of this subject shown by all the more recent authors, whether writing on the intermittent itself or on the diseases which it simulates, and not merely also from that of practitioners, but from the ridicule, already noticed, which many of the former throw on the nosologists for noticing these varieties ; treating them with contempt as unnecessary refinements. Thus

this able observer remarks that the intermittent is often accompanied by pains resembling those of pleurisy, phrensy, hepatitis, and lumbago, when the remissions are obscure; while he seems to hint that a marked symptom of this nature sometimes obscured the proper fever, and was a source of error by affording ground for wrong names. And I conjecture also that the same conclusions had been formed by Senac, and others of the older authors, when they describe cases of periodical headach, periodical delirium, and periodical coma, with or without fever; though, possibly, for want of a more definite generalization, these have been overlooked by their successors. To proceed with cases confirmatory of those which I have myself observed.

I have remarked that I had seen an obscure intermittent, mistaken for phthisis, more than once. To confirm this, I may quote Strack, who refers to many instances of the same nature: all the symptoms, including cough, having been present, while the proof was as complete as in my own, since they were cured by bark. One case of this sort in a female, which he relates, is a proof both of his sagacity and resolution; because the sister had died of a hereditary consumption, and the father was labouring under one. Thus

also, Morton, Werlhoff and Tralles describe a phthisis produced by or succeeding to intermittents, attended by the usual symptoms of that disorder, and successfully treated by bark: and an anonymous author quoted by Sauvages, similarly speaks of numerous cases, attended even by spitting of blood and pleuritic pains, which were decidedly periodical in their attacks and as regular as intermittents, and which were also cured by the same remedy.

Here is one example therefore, and as it happens, in the very first of these simulating, or, in another sense, simulated, disorders which chance has brought uppermost in these illustrations, where the authorities are as numerous as they are decisive and weighty. And yet is this one of the disorders, very especially, respecting which the greatest incredulity has been expressed. These at least are names which are not very safe objects of ridicule: it will be for the judicious and philosophical physician who may attend to this subject, to doubt whether a different accusation might not be retorted on those who may nevertheless be left to their own reflections on that subject, as on all else which belongs to this question.

On the subject of catarrh of this nature, if, in

suggesting that a certain summer disease of this kind might arise from this cause, I referred to the catarrhalis of Sauvages, I must here remark that the cases quoted under this term are of a different nature, inasmuch as more acute, both in the local affection and the fever, while of such varieties I have no experience. The cases cited by different authors are, however, numerous, and leave the question beyond a doubt. In some, it is so severe as to pass into peripneumony, still betraying itself by an intermittent character, and cured by bark. Monfalcon, as well as Strack, seems to have been familiar with this variety. And a very marked case is noticed, which serves to indicate distinctly the true character of such a catarrh; the peculiarity being, that in a tertian, on the day of the paroxysm, the cough was dry, and on the other, loose.

To confirm the cases of dry spasmodic cough of the character which I have noticed in my own practice, I find in Monfalcon what he calls a pertussis, as a very common occurrence, preceding the paroxysm of intermittent, and cured by bark. Strack also describes a dry spasmodic cough of this kind; but both he and Monfalcon seem to have noticed such a disease, only where there was also a marked intermittent fever present;

being apparently unaware of the cases, even more important in practice, because less suspected, where there is no intermittent fever sensible, and the disease is a mere periodical cough.

I spoke at some length of a pleuritic pain attending an obscure chronic intermittent, or as being a substitute for it, often grossly mistaken in practice ; and I then referred it to the pleuritica of Sauvages. I must however remark here once more, that his pleuritica is always an acute disease, or belongs to a well-marked, and generally a severe fever, either intermitting, or a proper remittent. Fernelius, Morton, and Strack appear also to have noticed no other cases : but such is their conviction of its true nature, that they decide freely on curing it by bark ; a recommendation which has been little followed, or rather has been entirely forgotten, by almost the whole mass of practitioners of our own country, and indeed often elsewhere ; since this is one of the cases where bloodletting is especially recommended and especially abused.

Of the arthritica, I have spoken but slightly, having had no experience of any value. But Strack appears to have often met with this variety, and in a very marked form. In some instances, the pains have been universal, but shift-

ing; in others, they have been periodical and regular; in others again, unintermitting, and steadily affecting different parts; while, very often, entirely without fever, so as to have caused the usual deceptions. In these cases, the proof has, as usual consisted in the success of the remedy, bark. On this variety I must further remark, that it might as properly perhaps be termed the rheumatica, while I need not point out how it illustrates what I have said respecting rheumatism, whether acute or chronic, without fever or with it, constant or intermitting, and of its cure by bark. If Rush also, not very amenable to the opinions of others, finds that there is a rheumatism of this character, it will be for practitioners to reflect on what I have said formerly respecting that disorder, and to see whether they have not very often persisted in a wrong and pernicious practice as to it. If I find further, that Strack notices a gout of this character, it is to this that the term *arthritica* should rather, and in strictness, be applied; unless it should be reserved for the rheumatism of the joints, should that disorder be ever proved to belong in any instances to this division; while I have, myself, no experience as to this variety.

As to the nephralgic intermittent, I must refer

to Morton, as I must confess my inability to understand that variety as it has occurred to him. I have been obliged to notice it elsewhere, as being probably a neuralgic pain ; but the disorder as mentioned by him, seems rather to belong to the inflammatory varieties of intermittent, and to rank with those which I have here been noticing.

To pass from these inflammatory varieties of the intermittent, I find that Strack quotes a case of atrophy, or inexplicable debility, which had been attributed to grief, and was cured by bark. This confirms the similar cases which have occurred to myself, when unaware of his remark ; in two of which, grief was similarly a preceding circumstance and the imputed cause. It might indeed be a real one, even on this view of such cases ; because that mental affection will reproduce chronic intermittent ; as it might, when united to the ordinary cases of intermittent, give rise to a new disease, the character of which, it is not difficult to understand, might be modified by the state of the mind ; this disorder being, as it is, so essentially connected with the nervous system.

If I have also noticed that menstrual irregularities are frequently produced by the chronic intermittent, or remittent, (it is indifferent which, for the present purpose,) I find this also confirmed

by the same author. Ordinary obstructions, menorrhagia, and irregularities, have thus occurred to him as to me; cured by bark under his care, as, by myself, by different means directed to the fever and not to the apparent disease. Chlorosis, an almost necessary consequence in certain cases, is equally noticed by him; while he also points out, what I have not seen, a periodical menorrhagia accompanying the quartan paroxysm. When he mentions that, in nurses, the milk is often suppressed by an intermittent, it is a case which I may quote on account of its analogy, but of which I have not seen an example.

I also remarked formerly, that a hectic fever, attributed to incipient phthisis, to scrofula, or to obscure visceral disease, was often supposed present, when the real disease was the chronic quotidian or remittent, leading to no small alarm and considerable errors of practice. I find that Strack, to whose support I am so much indebted, had made the same remark; while I may add here, what I then omitted, that in addition to the ordinary tests for distinguishing intermittent of this character, it must be remembered that the recurrence of true hectic is in the evening, and that the great majority of intermittent paroxysms recur in the morning.

The presence of dyspeptic symptoms in the chronic remittent, was another occurrence formerly pointed out, together with the erroneous practice which resulted from overlooking the real disease. If I do not find any exactly similar remark in the authors whom I have consulted, I find however what fully confirms the possibility of such a state of things. It is stated by Montluet as being a common disease in the pestiferous tracts of the Lyonnais, and, generally, as of a severe character; though he does not notice the chronic fever, which however we know to belong to nine in ten of the inhabitants of those districts, as the necessary endemic. Very naturally, according to the prevailing theory in France, he attributes it to gastro-enteritis or gastritis, which, in reality, may well exist to a certain extent, as it unquestionably does in many of the cases of even ordinary dyspepsia. We have the same observation from M. Nepple; who adds that though it is at first confined to the stomach merely, it extends in time so as to derange the liver also.

I recently mentioned diarrhea as alternating with intermittent, or as a substitute for the ordinary febrile paroxysm. I have not, as I then said, yet found a parallel case in authors; but a

diarrhea, decidedly not a dysentery, is noticed by many French writers as common in their intermittent districts : a disorder without pain, and generally without fever, often succeeding to the fever, extremely obstinate, and after a cure, easily brought back by slight causes. This, I presume, must be the same disorder which I formerly mentioned as occurring in the hulks at Woolwich ; and it is sufficient to have barely noticed the fact, for the purpose of preserving this series of corresponding observations as entire as possible. In Strack, I find cholera enumerated as a disease to be cured by bark ; and I might thus suppose that he had formed nearly the same view of it as myself, while if I may judge from the practice, this must sometimes also have been the opinion of certain English authors. Or thus at least, it is probable, must the remedy act, when it is said that bark is the effectual medicine in cases of the excessive secretion of bile.

If I find no case of periodical vomiting resembling those which have occurred in my own practice, I at least see in Strack a case of a continued disorder of the same kind cured by bark, and therefore probably of the same nature ; a misplaced intermittent. But with respect to hysteria, he quotes periodical disorders of this na-

ture as being very common, confirming my former remarks; the types having been both quotidian and tertian, and either with or without fever. This is the modification of simulating intermittent on which he seems most clear; censuring Sydenham for recommending bark in all cases of hysteria, and therefore leading us to suppose that this lauded physician had actually thus cured cases of the hysteria of intermittent, without being aware of the nature of the connexion here pointed out.

This terminates the list of cases which I find in authors as they had occurred in my own practice: it remains to notice a few which I have not seen.

Periodical hiccup following a terminated intermittent is one of these; and this I must consider as a species of translation or substitution.

Of neither epilepsy nor convulsions have I met any instances, but I find them recorded in numbers by different authors. In a case of Strack's, the former disorder succeeded an intermittent, and with the same periodical returns, being cured by bark; and it is a further interesting one, by having been followed, subsequently to this cure, by a pain of the left leg and a palsy. This single case therefore, like many which I have described,

shows the connexion between several of these local diseases, and their dependence on intermittent; as there is little doubt that the pain of the leg was a Neuralgia: though this author appears to have been perfectly unacquainted with the nature of that disorder, and has consequently left a serious defect in his otherwise valuable work. That he must have seen it in many other cases than this, is not to be questioned; while I may as well remark here as any where else, that of all those authors which I have consulted as to intermittent, ancient or modern, not one has noticed such a disease, while it is most certain that they must all have seen it: a clear proof that it had never been suspected to belong to the intermittents, as it could not, in that case, have escaped enumeration, and would on the contrary have attracted a principal attention.

Caldera, Bain, Sauvages, and others, also mention the epilepsy belonging to intermittents: but as it is unnecessary to dwell longer on this, I may mention that Strack and others have in the same manner described ordinary convulsions, especially in children, either attended by intermittent fever or not, and the returns being, in each case, periodical, while the same remedy was successful. One marked case, where, in a girl of

seventeen, the convulsion returned regularly in the quotidian type, during nine days, each paroxysm lasting twelve hours, and which was also cured by bark, is too explicit a one to be here omitted. Of a cataleptic intermittent noticed in Sauvages, I know, practically, nothing, and may here be content with the term ; while to him and his authorities I may also refer for the fact, having nothing of my own to say respecting it.

A periodical colic is noticed by Strack, as if it were a mode or a symptom of intermittent. I cannot exactly understand his description or views as to this case ; but as I have had more than one occasion to suppose that the Neuralgia had, in some patients who had suffered this disease in various nerves, appeared in different parts of the abdominal cavity, it is possible that such cases may be of this nature. Unfortunately, his ignorance respecting this disease has impeded the evidence which we might possibly have received on that subject from him, as to these cases.

I have no experience of a case mentioned by Pacoud as not uncommon in the unhealthy parts of the Lyonnais, and which, if it is not precisely a transference or misplacement of the intermittent, is too nearly allied to such cases to be passed over. This is the alternation of ulcers of the

legs with periods of the fever: and it is at least evident that it bears an analogy to all those cases, such as that of palpitation formerly pointed out, in which, when a local direction or symptom occurs during a chronic intermittent, the fever disappears, or becomes so slight as to attract no notice.

I have here described a palpitation of the heart of a very severe character, as one of the modes of intermittent; but unless the case which I have just noticed as existing in the *Mem. Acad. Sciences* is one of the same nature, I find in authors no cases of this kind: a proof that wherever they have occurred, as could not fail, they must have been misunderstood. There is indeed a notice of a similar case by Storck, but in that one there was an acute fever. Nor can I doubt but that if physicians had taken the view which I have done of this class of intermittents, and very particularly had it been known to the numerous authors on this disease, especially to those of France and Italy, where the opportunities of observation must exceed by a million of times any which England can offer, I should have been easily able to produce hundreds of cases in confirmation, where I have with difficulty found one;

and it is very probable also that I should have materially extended the list of these simulated diseases.

There is one yet remaining, however, and that is, amaurosis. It is noticed by Storck, and also by Davidson; the disorder, in this latter case, returning with each paroxysm, and resembling therefore the intermitting palsy of the limbs mentioned when treating of that modification. That these cases are highly interesting, even as to the history of palsy, by showing how this extraordinary fever can influence a single nerve, and how singularly it can exert that influence, I need not urge here; but I consider them also of value, from the bearing which they appear to have on Neuralgia. Hereafter, I shall have occasion to show that this disease is the similar localized action of an intermittent, and that, in it, pain and palsy are intimately associated. And if I shall then also have occasion to suggest that amaurosis may be the produce or consequence of a Neuralgia which has occupied the eye, that suggestion will find no small confirmation by the present facts; while it may eventually also be proved by future observation, that this very obscure disease, amaurosis, is sometimes at least, and possibly

much oftener than even I am inclined to suspect, connected with or dependent on intermittent of irregular character.

In terminating this part of the subject, since I cannot fail to be aware that it will, as well on a general view as in many of its details, if not in all, appear matter for doubt and incredulity, and especially to those who have not studied or been familiar with intermittent fever, it might be proper, and possibly useful, to give a general view of the reasons, *a priori*, why that which appears to me to be proved by evidence, may be true, or ought to be true; to confirm by a general view of the action of the assumed cause, the facts here referred to that cause, as being in reality such as ought to arise from it.

To do this however effectually, and by a perfect induction, it would be necessary that we should be able to assign the proximate cause of intermittent, or that primary change in the functions of the body, or in the parts affected, which is produced by Malaria. Here however we are at a stand; or the very foundation of a complete philosophical induction is wanting; since, under the head of remittent, I have already shown that we are ignorant of the nature of this first effect,

or of what, in medical language, is called the proximate cause.

I must therefore leave this part of the history of intermittent, a subject which generally occupies so conspicuous a place in medical systems, a blank, otherwise than as I have already noticed it in the case of remittent; since I have never been able to discover how knowledge is augmented by loose conjectures and by unmeaning terms and substitutions of terms. But that ignorance, the want of the fundamental step, does not prevent us from tracing useful analogies beyond this first foundation; while we may even safely and philosophically venture to do this by the adoption of an unknown effect or cause; effect on one side as it is cause on the other; or, to derive an illustration from mathematical reasoning, by the substitution of an unknown quantity. If useful truths are thus elicited in this department of philosophy, so may they be in the present case, and on very similar principles. On that ground, my task will be to prove, that the cause which operates on the whole nervous system, producing a certain effect, which is the unknown quantity and the cause in this case, does operate also on less than the whole, and further,

on its separate portions : that the visible effects are a joint result of this unknown action, and of the nature, or natural condition, or offices, of the different portions of the nervous system thus affected, and that these are the diseases under review ; and, further, that the analogies which pervade the whole, are such as confirm the proof of a common, if unknown, cause and effect : acting in an analogous mode on nerves performing different natural duties, rendered thus diseased, and each disease being varied in consequence of the nature or functions of that particular portion of the nervous system which is thus deranged.

To be able to form such an induction, would be, it is plain, to add the philosophical reasoning, and the proofs, *a priori*, to the evidence ; and to give to the whole system that form which philosophy demands, and which will not be without value, though the actual proximate cause should for ever remain unknown. Even to approach to it, is to give a certain stability and unity to the present views ; since it is an approach to that perfect generalization which constitutes science, and with a modified degree of which we are often compelled to be content, in sciences far more within our reach than physic. This is the at-

tempt that I propose to make; but as it will be convenient first to describe all the other diseases which I have been induced to rank under the same cause, I must defer it till those have been discussed.

CHAPTER VIII.

On the Cure of Intermittent Fevers.

THE cure of intermittent fever in its common forms, or rather the remedies that are in use for it, are all so well known, that my task here will be but to repeat, since I have nothing strictly new to propose on that subject. It will be useful however to examine some of the remedies at a little length; for many reasons, and among others, for the light which they throw on the nature of this disease. On what may belong to the cure under the anomalous forms already described, the remarks will be best introduced where they will add the most illustration.

It is a somewhat lax and theoretical division of these remedies which I must here adopt, because I cannot easily discover a better one; as a true one could not indeed easily be formed, without knowing previously in what the disorder really consists, and without knowing, further, how medicines act on the body: a species of knowledge in which physic is as yet very deficient. The most obvious division then at present, is into

those remedies which act on the mind alone, or on the nervous system through it; those which seem to act on that through the body, and the effect of which is judged to be solely on that system, from its rapidity; the tonics, which, if they do thus act, may be supposed to exert some other power also, or that power in a different manner; and lastly, changes of habit, be the nature of those changes what they may. Of other remedies, such as bloodletting, not to be ranked under any of these heads, and very generally, of incidental or extraneous utility, if I may use such a term, I must treat separately as I best can.

It is here however very essential to commence by distinguishing between the simple and the chronic intermittent, or between a new disease and a habitual one; as the remedies that are effectual in the first, act with much less power in a disease that has relapsed or returned, and as, in cases of long duration, they seem to lose their power altogether; while it is from confounding those two very distinct conditions under one general term, that so many useless remedies are applied to the latter, and that so many failures occur, even in the use of valuable ones. I know not however that any distinction is necessary as to the types of intermittent; since, in all of those,

the remedies are the same, requiring only to be regulated differently, by considerations drawn from the occurrences and lengths of the paroxysms and the intervals. Let me also here premise, that while I do not propose to discuss this subject as to the severe or malignant intermittents of hot climates, whether these be simple or complicated, so, in as far as this mode of marsh fever approaches to remittent, the methods of cure have been already examined, though it will here be impossible to avoid some repetition.

The simplest remedies are those which act on the mind, or through it; while their number is far greater than I choose here to record. But while there can be no doubt of their powers, and therefore of their value, it must be remarked that these are the remedies above all others, the action of which is limited to new diseases, or to those which have at least not relapsed often; while they are, further, scarcely ever successful, except where all the circumstances of the disorder are regular. Thus also do they appear to succeed better in tertians than in quotidians; while there seems no certain experience of their success in remittent. I ought to add also, that their action requires the belief or the confidence of the patient; or, Faith; without which, they are in-

variably nugatory, otherwise than as any other strong mental impression, such as disgust, fear, and so forth, may be the substitute for this. Thus it is that superstitious practices and charms, which succeed with the vulgar and ignorant, are utterly inefficacious with the incredulous, or with those who may possess a superior education; while among those however, certain nugatory remedies will cure the disease, by inspiring that confidence to which either ignorance or false reasoning is necessary, when they fail with superior minds, capable of reasoning respecting causes and effects. In whatever way these remedies act, the fact itself is an important one as relates to the theory of the disease; since that action, and the mode of it also, the suddenness, among other things, go far to prove that it is situated in the nervous system, or in the brain and nerves; and that to influence that system, directly and solely, is the cure, and probably the end to be aimed at by every remedy.

The Charms used for this purpose, consist in mere words, spoken by some person reputed to have powers akin to the witchcraft of the days of superstition, or in texts of Scripture or other words attached to the person, like the periapts of antiquity, and the fetiches of Africa; contrivances

among which the mystic word Abracadabra is or was one of no small note. Amulets, equally successful, are the remains of a very general practice, still preserved, if unwittingly, in the coral and bells of children, in the ear-rings of the French populace and military, and, with the open acknowledgement of superstitious folly, in the anodyne necklace even now used for dentition in children, and by those also who are reputed to be possessed of sense and education. Thus also is a piece of glazed or cambric pasteboard alone, found to be a cure for tertian; as are many more applications equally inactive as medicines, which it would be a waste of time to enumerate; since, provided the superstitious confidence of the patient can be excited, the application itself may consist of any thing. An endless number of plasters, appearing to possess the active medicinal qualities which they have not, might be added to these, as of more extensive powers; since they excite, by their names or sensible properties, the necessary confidence, in a class of persons far above the most superstitious and the lowest vulgar, at least in rank, if not always very strongly distinguished from them in mental powers.

Under this head, if I mistake not, I must also class a vast catalogue of internal remedies; me-

dicines of the most discordant properties or of no properties at all, but having equally gained a degree of reputation, greater or less, from occasional or partial success depending on this principle. These form that mass of trash with which old women, of whatever sex, torment their neighbours, with that intrusive self-conceit which belongs to all voluntary empirics, and against which it is in vain to remonstrate, by showing that their utility is nothing without confidence on the patient's part, and that, in the chronic disease, they are utterly void of power, even over imbecillity and ignorance.

Not to enter into an enumeration of a catalogue with which I might fill many a page, and where I might even commence with Cato's prescription, a formula well worthy of ranking with the balsam of Fierabras, I am even of opinion that bark itself sometimes acts in this manner; an effect not very improbable, when the universal confidence in it is considered. It is possible, I will not deny, that the celebrated Sicilian remedy, powdered charcoal, may have some medicinal effect, but it is also not unlikely that it acts solely in this way, since it seems to have no action on the system and to undergo no changes in the body. With respect to spiders or other remedies

exciting mere repugnance, they may act on the faith of the patient; but they seem rather to operate by exciting disgust, one of the strong mental impressions which removes this disorder: and this I also conceive to be the action of cobwebs, which, containing much ammonia united to some highly putrescent animal compound, form an exceedingly nauseous medicine.

Thus also does a strong mental impression produced by moral, and not by physical causes, cure the intermittent, or at least remove a paroxysm in similar cases. This effect has often been produced by fear, by the sudden necessity of exertion, by hope, or by joy, by unexpected success, and even by sudden grief or disappointment; and if in a recent work of African travels, the power of the sudden presence of a beautiful woman in this manner may excite a smile, there is no reason to doubt the truth of the narrative, as it is by no means a solitary case. I have only to add that in all such cases, the cure of but one paroxysm is often the cure of the disease; as if it was a habit not yet so firmly established, but that the mere interruption of it was a sufficient remedy.

With respect to the effect of charms however, it is yet necessary to add one remark, for the sake

of the higher vulgar, who are apt to lay too much stress on their efficacy: not perhaps on that of cambric paper, spiders, and abracadabras, but on medicines of apparent power, the action of which is, in reality, on the imagination. It is this; that the ague which is the most severe, is, in fact, very often the slightest disorder, paradoxical as that may seem. It is a disorder which is most violent in its commencement; or the fever, as the most perfect and regular, is then the most distressing, both to the patient and the spectators. But severity and obstinacy are different things; and thus also though a new disease is more severe in general than a relapse, it has not the same persistence. It is the ancient and chronic case which appears slight to the bystander, and which, whatever the patient may suffer under it, is, even to him, not such a cause of absolute disability as a new disease. Yet this is precisely the case in which it becomes incurable, or difficult of cure, resisting medicines as well as charms: while the vulgar, naturally enough according to their own ignorance, conclude that what cures a severe disorder must, *a fortiori*, be even more efficacious in an apparently slender one.

The next division of remedies, may be sought

in those which do act powerfully, and suddenly also, on the body, and through that on the nervous system, but whose action is temporary. With respect to the whole of those, their effects on the disease seem to be restricted to their action on the stomach immediately before the accession of the paroxysm, or at least not long after its commencement. Their palpable effect is that of shortening or preventing the cold stage, and inducing the hot one; or else of shortening or diminishing the force of the whole paroxysm, or finally of preventing its occurrence altogether. Thus does the interruption of one paroxysm sometimes terminate the whole disorder; and hence such remedies act in some cases almost like charms; acquiring, in consequence, in the eyes of the ignorant and of the self-constituted prescribers with which the world abounds, an universal reputation which they are far from meriting. Occasionally, by repeating them before subsequent paroxysms, should they not entirely succeed at the first exhibition, they gradually reduce the force of these, and thus the disorder disappears. But it is very rare, that, in the chronic and confirmed intermittents, they do more than remove a single paroxysm, or diminish its inconveniences.

As to the medicines themselves of this nature, they consist of a variety of substances commonly considered as stimulants; and under whatever forms or combinations they may be given, or of whatever they may consist, alcohol, opium, and spices, will represent the whole. Brandy and pepper, brandy and laudanum, brandy with capicum, or gin, or rum, or large draughts of hot wine, with spices or without, will serve as sufficient specimens of these remedies under their popular forms; while physicians need not be told under how many shapes they may be extracted from the pharmacopeia. Among these remedies before the fit, or at its commencement, I ought not however to omit the application of the tourniquet to a limb; but as it does not appear to have produced the advantages which were asserted by the person who introduced it, it seems to have fallen into just neglect.

This may suffice for a class of remedies, of which the application, to be useful, must, in most instances, be made before the fit, but of which, some also are applicable during the early part of it. If I could not make a division which would not have had its inconveniences, I must now therefore describe the treatment, as far as it is simply and rationally medical, through the pa-

roxysm; yet while noticing bleeding and some other matters, mentioning them merely as they relate to the time of using them, and reserving till hereafter, that discussion as to their merits and utility, which, from its length and intricacy, requires a separate place.

The treatment in the paroxysm is rather palliative than curative. Warmth and warm drinks in the cold fit, the reverse in the hot one, with rest and silence, comprise the ordinary conduct necessary. In the former, purging, and still more, bleeding is improper; this last even causing sudden death. Emetics however will frequently bring on the hot stage, as, given before the cold one, they sometimes prevent the paroxysm; which also, I may here remark, is often brought on when not actually impending, by cold drink, by exposure to cold, and by mental affections of various kinds. I cannot discover the purpose of blistering on account of delirium, in the hot stage, because that will terminate before the remedy can act; while in any view, it is an idle suggestion, except in the severer diseases of hot climates, where local affections of the brain are demonstrated or rendered probable by the character of the epidemic. It is in the hot stage that purgatives are best administered; and this is

also the period for bloodletting, when that is judged proper. Nauseating doses of antimony, and opium, are among the remedies applauded by many, in this stage ; but while we, in England, are ill entitled to judge of their value in the malignant or severe intermittents, they seem unnecessary, to say no less, in a general class of disorders, the cure of which is entrusted to the remedies given during the intermission. This remark may equally apply to sudorifics. I shall proceed to the question of bark and of the other remedies used in the intermission, before I examine further into the value and use of the means now described.

The last division of the acknowledged remedies of intermittent, consists in the medicines which are called, it would not be very easy to know why, tonics. These may all be included under vegetable bitters, astringent vegetables, and metallic substances supposed to possess an analogous power, it would be equally difficult to say on what grounds, so unphilosophically lax are the ideas attached to the term tonic. At the head of each of these three divisions, we may place, respectively, the *nux vomica*, the peruvian bark, and arsenic ; and if numerous other substances can be mustered in each division, I know not that

there is any reason to consider them in any other light than as varying in power, while under each head, all of them seem to be less effectual than the three which I have named.

I need not now give a catalogue which every pharmacopeia can furnish; but it is necessary to explain the mode of administration. This is, to give the largest quantity which can be taken without offending the stomach or producing disturbance, (since the rule seems the same for all,) during the intermission, and to avoid their use during the paroxysm. This rule, however judicious, must not however be drawn too strictly; as in the case of short intervals, such as too often occur in the quotidian type, it is necessary to break through it; in which case I must however say, it is always best to avoid the use of such medicines during at least the cold stage.

It is not within my plan to waste words on the discussion of doses and formulæ, any more than on the varieties of these medicines; as such matters abound in every treatise: but I ought to observe that it is often useful, particularly in the cases of a violent paroxysm with short intermissions, and especially in the quotidian, to unite this class of remedies to the former; or to attempt to weaken the paroxysm, so as to diminish

the duty expected from the other remedies or to gain more time for their administration.

If this is the most generally adopted, and also the most generally efficacious of the different classes of remedies used for the cure of intermittent fevers, I must still, as before, limit their efficacy chiefly to new or simple cases, or to those which have not become a confirmed habit. It is a lamentable truth, that they are of little efficacy when these disorders have become chronic, and that they seldom produce any effect whatever on a disease of long standing ; such an opprobrium does the confirmed intermittent remain to physic and physicians.

This constitutes all which it seems requisite to say at present respecting the general treatment by means of the acknowledged medicines, as I must hereafter quote a few opinions on this subject : but a few remarks of an explanatory nature will still be useful. These relate chiefly to bark and to arsenic.

If, in much of foreign practice, it is the custom to give as large a quantity of bark as can be taken, within one, two, or more intervals, and then to cease ; recommencing at some distance of time, should it fail, it is more common with us to give it in less quantities, and to persevere without

limit. It is difficult to decide always on the comparative advantages of these two modes, from the great differences in the character of the disorder. But, while I must return to this question immediately, one remark seems well founded, however often neglected ; and it is, that the perseverance in bark beyond a few days is nearly useless ; while, if it has been said that whenever it offends the stomach it produces no good effect, this is contradicted, as I shall presently show, by other physicians. And further, it seems often true, while even less known, that where a large dose is inefficacious, a small one is often useful ; or, in reality, that ten or fifteen grains will sometimes produce a better effect than a drachm. Of the various preparations, the now common combination of kina, its sulphate, seems the only one which deserves a preference to the bark in substance, while it will probably prove to be in every instance preferable.

Having thus simply stated the use and application of bark, whether in remittent or intermittent, since the same remarks apply generally to all the modes of marsh fever, I must now quote from authors some particular opinions on this head, leaving to the judgment of the reader to decide for himself on what would involve endless

questions and criticisms. A treatise that should attempt to strike the balance among opinions in physic, would never end: but a writer does not perhaps perform all his duty, if, after giving what he conceives is best, and what he thinks sufficient, he does not at least inform his reader what others also have thought. But even here I must select; for, even here, I should fill more pages than enough with variety and discordance.

Millar, Jackson, Lind, and many more, agree that bark does not produce visceral obstructions, but, on the contrary, prevents them, by checking the fever, which is their true cause. Brocklesby and Strack proceed even a step further; since they say, that, even after the cure of the fever, this remedy removes the obstructions of the spleen, and that it is even the best mode of treating the consequent dropsy. On the other hand, there are authors, perhaps even more numerous, who assert that the bark is the real and efficient cause of these obstructions; while, not to quote minor facts and authorities, I shall content myself with Ramazzini, who, in accusing the bark of producing dropsies in this case, quotes at once, an instance of four hundred soldiers becoming thus diseased, in one mass, and in a few days, in consequence of its use. If we should be inclined

to think that the Italian here proves too much, we must also recollect the prejudices so long and bitterly entertained against this remedy; while we must also remember that to confound causes and effects is not very uncommon, that there is a considerably assimilating power in hypothesis, that gastro-enteritis is, with some, the cause of fever as of all other diseases, and much more which I shall leave to the judgment or discernment of the reader who has already at least discovered my own opinion, and can therefore require no more of my criticism. Whenever I find myself overwhelmed by facts like Ramazzini's, I always recur to the physician whom I once heard at the Institute, in Paris, who proved, by some thousand cases selected from Italian and French hospitals, that no intermittent fever ever lasted beyond fourteen days.

With respect to the administration of this remedy, opinions are not less various, and often not much less contradictory. A few must suffice as specimens; while the reader must, for the most part, exert his own ingenuity in trying to reconcile or account for them.

It is always unsuccessful when bleeding is necessary, says Rush: it is always pernicious or destructive, say the majority of French practi-

tioners ; while, unluckily, the preliminary question as to bleeding, is not in itself agreed on. Gastro-enteritis, inflammation of the stomach and bowels, one or other, or all, is the cause of the fever, is the very disease itself, according to present France : and the theory being thus settled, it is obvious what the practice must be. An equal number prescribe it from the beginning, even in decided continuous fevers of this character, and in all cases except where demonstrable inflammation is present : nearly as many have proved that it is the remedy, even for the inflammatory state first quoted ; or whence does it cure the disease at all, and why does it cure the intermittent ophthalmia ?

Of minor matters ; as to doses, Millar has given an ounce in a dose ; Jackson, two ounces in eight or ten hours, in bad remittents. Cleg-horn delayed it till the fifth day in tertians : many hundreds give it after the first fit, and often succeed in thus stopping the disease. If the intermission is short, it must be given through the whole fever, say some : in that case, say others, it is not to be given at all. Need I quote Pringle, Hillary, Brocklesby, Balfour, Johnson, and hundreds more, for examples of such differences ? must I not rather say, that if there are prejudices,

if there are hypotheses, and if there also are ignorance and bad observation, there are really differences of climate, constitution, seasons of fevers, which if they will not justify all that has been said on opposite sides, will at any rate teach us to be cautious in judging of what we have not seen, and should induce us of the medical profession to cultivate a little more forbearance towards each other's opinions than is very customary.

It is a variation of practice, worth noticing here under the head of authorities, since I have no experience of it, that in France, it is very common to increase the doses gradually through the intermission, or if it be long, not to commence at all till within six or eight hours of the expected return. Lastly, since I might not easily end on this subject, if it is a very prevailing opinion that bark is ineffectual unless the *primæ viæ* have been previously cleared, the French consider this as utterly unnecessary; while when Millar and many more assert that this remedy is useless should it purge or vomit, Jackson and Munro are equally decided that it is just as efficacious under those circumstances as when it is retained. And the former of these authors asserts, that no man dies of fever who has succeeded in taking two ounces of bark.

With respect to the varieties of the bark, after all that I have read or seen, I do not feel sufficient confidence to discuss their relative merits, and shall therefore trust to the reader to discover for himself the truth, if he can, as to the pale, the yellow, and the red bark, the *Jamaicensis* and the *Caribbea*. Yet if *kina* is the efficient substance in Peruvian bark, it is plain that the yellow bark must be the superior remedy, since that variety contains a larger proportion of this essential salt, than any of the others. Of the value of magnesia or of lime-water as additions, I am doubtful: as to that of acids, it rests, for obvious reasons, on better grounds.

As to the bitters, after the *nux vomica*, it is scarcely necessary to enumerate *quassia*, *wormwood*, *carduus benedictus*, *snake-root*, *gentian*, *centaury*, *chamomile*, all of them remedies of a certain celebrity in different hands; while *angustura*, *Swietenia*, *cascarilla*, *Winter's bark*, *willow bark*, *galls*, *oak bark*, and even *alum* and more, have had their several abettors, just as, in the metallic class, *iron*, *copper*, *silver*, and *zinc* have taken their turns, among those who seek in variety for some mysterious powers which they perhaps scarcely acknowledge to themselves.

I am now bound to make a few remarks re-

specting the value and use of arsenic, which has been lauded beyond its merits, and often also condemned and shunned, rather from the fear excited by its name than any thing else. That it often offers a rapid and effectual cure for the intermittent, admits of no doubt ; but it is as certain that it very often fails, while the decided prejudices against it, almost everywhere except in England, which have rejected its use, put it out of our power to discover, by a proper and sufficient experience, what its real value is.

I have little therefore but my own experience to judge from ; and this is, in the first place, that it is less efficacious than bark in diseases of a highly febrile character and of long duration ; or that as the intermittent approaches nearer to the remittent, arsenic becomes an uncertain remedy, and that in the very chronic disease, it appears to me to possess no power at all ; though I know not, that, in these latter cases, it is more nugatory than any other remedy. In a new and a very simple intermittent, and in the tertian particularly, it seems to offer a more rapid remedy than bark, while its superior convenience is manifest.

But if I were to compare it with bark in those cases where the disease puts on the anomalous symptoms or characters which I have described,

I should often judge it a more effectual remedy than that ; and although my own experience is far from sufficient to decide this point, I have also found it the best medicine in all the cases of the most purely local affections, or in the Neuralgia ; not but what it fails much too often, even in these, and particularly where they are of long standing.

In as far as it does fail, there is reason to think that the fault is very often in the remedy itself ; and I cannot concede that the well-known combination of this substance, rather, of its primary acid with potash, commonly called Fowler's solution, is the proper mode of using it. It is certain at least, that when this has failed, the same substance, or the common arsenic of the shops, in powder, has often succeeded, and even immediately. Of this, the sixteenth part of a grain is an equivalent to the common dose of the solution, and capable of being repeated three, or even four times in the day ; while it is conveniently divided by means of white sugar, which also aids in reducing it to that fineness of powder which cannot be too perfect. With respect to the superiority of arsenic in substance to its neutral salt, I may quote the experience of a friend, who, residing in a district where tic douloureux is ex-

tremely common, and where the solution seldom succeeded, now reports to me that he finds the powder almost infallible; giving it without the least inconvenience to the extent of 1-12th of a grain for a dose, and finding that its utmost limit is 1-8th, which can seldom however be endured, though having administered 1-6th without further evil consequences than gripings.

As this remedy is held to be attended with danger, and also with ultimate bad consequences, I must here bestow a few words on that subject. When given in excess, short of its properly poisonous effects, the symptoms are various, but the following have been observed; headach, sweating, tremors, nausea; vomiting, griping pains, with spasms of the lower extremities, and, sometimes, affections of the urinary passages; more frequently a red eruption on the skin, with swellings about the eyes and other parts, resembling that produced in what is called a surfeit, from eating muscles, and, in particular persons, many other substances. I must also remark, that, as in this latter case, there are individuals who thus suffer from it, even in the minutest doses, and that the eruption of the skin appears to be one of the most common effects, generally however limited to the face and the breast. That effect, together

with slight nausea, are the ordinary, and commonly the sole ones, unless the dose be excessive.

These symptoms naturally produce alarm, when the patient knows the medicine which he is taking; but I have never seen any ill consequences resulting. They are all easily removed by brandy, as is the common surfeit, or by opium, and if not, they cease of themselves in a few hours. And I am entitled to judge thus, from having known different patients persevere in the remedy for many days, or even weeks, in spite of such effects, even when they were very severe; while their occurrence does not diminish the useful action of the remedy. It has been said that camphor prevents them from taking place; but my own experience as to its effects of this nature is imperfect.

Besides these striking effects, it happens that, after some days' use, the effects of arsenic become sensible in other ways; though, even here, I have not found any further inconveniences following. The pulse becomes quickened, and the skin hot and dry; while there is that peculiar feeling of languor and debility, well known as the effect of mercury acting on the constitution. Inflation of the intestines, or a swelling of the

abdomen, also very often attends this condition. If these effects are comparatively endurable by the patient, they seem to be such as could not be continued long without hazard; though I have not myself seen any further evil consequences. In this case however, it is prudent to interrupt the use of the remedy, and to interpose purging, by means of which the effects in question disappear.

This is evidently an accumulation of the effects of this metal, analogous to what occurs in the use of mercury; and hence it has been argued that the poison might permanently attach itself to the body, so as, even at some far distant time, to produce evil consequences. It has been particularly said that it has induced palsy, or paralytic effects on particular nerves, when thus given in Neuralgia. But this is to mistake the result of the disease for that of the medicine; since I shall hereafter show that such effects are common as following the painful state of the nerve, and occur equally whether any medicine or none at all has been used. And when I have pointed out how often paralytic affections are the produce of intermittent, noting also a case of the shaking palsy thus arising, it is easy to see how, under ignorance as to this natural result, a discredit must

often have been thrown on this remedy from false inferences.

Nor is it a sound induction to say, that arsenic must produce these effects under the form of a medicine, because when gradually breathed for a course of years or months, as it is by workmen in different manufactories, (but very rarely now that its use in glass-making is abandoned) it induces palsies of a local or more general nature. In these instances, the dose is incomparably greater, as is the continuance; and between the two cases respectively, there is exactly that similarity which occurs when mercury is gradually introduced through the lungs through a long space of time, in water-gilding and other manufactures, and when it is administered as a medicine. In the former case also, the consequences are palsy, and not the common effects of mercury as given in medicine; so that it is possible the mere mode of introduction may, in both cases, have effects which do not apply to the usual mode, in medicine, of taking it through the stomach. With respect to foreign, and particularly French opinions as to the use, or rather the danger of arsenic, they are expressed with too much violence to command much attention; since they are not the result of experience, but of

the sound of the word ; while they are but in conformity to that somewhat party feeling, which, in finding that mercury also is misused by English physicians, sees no medium, and passes on this valuable medicine an almost universal condemnation.

I must here, now, not forget to add, that in France, great praise has lately been given to a combination of opium and antimony, (laudanum and antimonial wine) given in moderate doses, and in the manner of bark, through the intermission : but I have had no experience of it, and cannot find that it has been adopted in our own country, so as to admit of any deductions as to its utility or effects.

Such is all that I think it requisite to say respecting the remedies of intermittent, as far as they consist in medicines. But I must still inquire respecting other remedies that have been used or recommended, whether for their good or evil effects.

The cold bath has been tried, and I have little doubt that it might succeed, and has succeeded, under the same circumstances in which charms, or any sudden impression made, whether on the mind or the body, are successful. But, to this, its utility must be limited ; unless indeed it might

operate, if persevered in for some time, upon the chronic disease, in the same manner as any great change of habits does. Having no experience however, I can only point out thus its possible effects; leaving to practical physicians to consider the obvious cautions required in adopting such a remedy. I can equally suppose that the hot or the vapour bath might prove a remedy, if administered before the paroxysm, on a principle analogous to that which renders brandy and opium useful; and thus in fact has it proved one, although I cannot find many records of trials on this principle. But as far as my own observation has gone, it is pernicious in the chronic disease; aggravating the relapse itself, and producing a tendency to more frequent and more severe recurrences. That this should be its effect, might be also anticipated, from the fact that the same consequences follow from the use of any remedies that induce debility, as from all debilitating actions, be these what they may. If the administration can be so regulated as not to produce that effect, it is easy to modify this reasoning.

I have already said so much respecting the use and abuse of mercury when treating of the chronic remittent, that I need not go over that ground again; since the remarks apply equally

to intermittents, with such modifications as must be left to the judgment of the practitioner in each case, and on which it would be endless to give minute rules. The general principles must be adverted to ; and they are, that it may be useful by removing glandular affections, or by producing a new habit, in the chronic cases, or a new disease, in the acute ones ; and reversely, that it will be pernicious by inducing debility, or by operating in a manner that we cannot definitely understand, on the nervous system, so as to increase that, which, for want of a really explanatory term, we must call by the customary and vague one, its irritability. That mercury does, even in a healthy subject, produce a high degree of both these effects, is familiar ; and it is therefore easy to see how it may prove the pernicious medicine in this case, which ample experience has shown it often to be.

The remarks which I might have made on purging, have also been chiefly anticipated ; as I have further explained, in the same place, the different actions, or powers for evil, of the different classes of these medicines. All this applies to every form of the intermittent ; and with the same distinctions as to the simple or new, and the relapsing or chronic disease. In the former, and

under circumstances in the variety of the disease, or in the constitution or condition of the patient, or in the accessory symptoms, the nature of which it would be superfluous to explain, since they belong to general and well-known principles in physic, purging may often be positively useful; as, to maintain the regular action of the bowels, is always indispensable. But in the chronic varieties, and in these, in proportion to their duration and the debility of the patient, while it is not less indispensable to maintain the bowels in a natural state, actual purging is almost invariably pernicious, unless applied to for accidental and specific purposes, of which every physician can judge. The common, the very common effect of it, is to cause relapses or returns of a disorder that has ceased, and thus to render chronic a case that might have terminated; and when what are called courses of purging medicines have been resorted to, whether from any theory of their utility, or from a mistaken view of the symptoms and their cause, it is not unusual to see produced, the most inveterate cases of chronic intermittent, and very generally also to find them under some anomalous form that might never else have occurred.

It is for this reason that I may be pardoned for

urging this subject again, and the more particularly as it applies equally to all the cases of chronic Neuralgia under its endless modifications. In some of these, as in some of the anomalous intermittents that have been already described, there are symptoms, or cases, in which purging is reputed to be the true or the sole remedy; such disorders being viewed as of an independent nature, or as depending on some imaginary, or even real, causes of their own; the possibility or probability of their arising from intermittent, or being modes of intermittent, being overlooked or unknown. And while this practice is thus esteemed, it has also, within a few years, become a fashion in England; or has acquired the reputation of an almost universal remedy, from writings and causes to which I formerly alluded, and with the usual pernicious consequences which attend every active system of practice thus rendered fashionable and thus empirically adopted. And also, that it is not merely a fashion, but one peculiar to ourselves, they know full well who know the state of continental practice, and the horror felt by French physicians in particular respecting it, and against us; though, as usual in all such cases, the system of France runs to a pernicious extreme in the opposite way.

It is not within my limits to note all the evil consequences daily produced by this thoughtless and almost universal practice ; since the history of its abuses would in themselves make a volume. But, be these what they may, it is not physicians who are now to bear all the blame, whatever share they may amply merit ; since, while in our day of universal pretensions to knowledge, it is the fashion for every one to suppose himself a physician, at least in his own case, according to a vulgar proverb, this is also the class of medicines which every one thinks he can administer with safety and advantage. With us, it might be imagined that “calomel and salts” were not merely matters as simple to understand and as intelligible in their effects as articles of diet, but that they were almost necessary articles of diet themselves ; nor is it ever imagined that they can do harm, any more than it is ever asked by these persons, whether self-empirics or trading ones, what the nature or causes of the disorders to which this universal remedy is applied may be, or what the circumstances or constitution of the patient. If the united ignorance and presumption of self-empirics could ever find an excuse, they might indeed claim it in this case ; when they see practitioners of high fame, if no-

tority be fame, following similar universal systems of cure, applying salts or "the blue pill" to every disorder or symptom in the nosology, and without inquiry; and thus, while saving themselves all the trouble of thinking, rendering physic an art which may be practised by any one, without previous study or present observation; since the Alkahest does all.

If it is strong language, it is scarcely exaggerated to say, that this universal tampering with salts and calomel is one of the greatest misfortunes which fashion and folly united ever entailed on England; while it is even matter for satirists, to find that a course of the waters of Cheltenham or Leamington, at once powerful and precarious, a system of active practice which can never be neutral, and which if not useful must be pernicious, is held a fashionable necessity, a mode of passing time, equivalent to any other expensive system of idleness on which society has stamped a certain reputation. But this is a small portion indeed of the evil, when we review the whole of this most extraordinary fashion, in a manner however in which I cannot undertake to examine it here. Whether the old Roman practice of emetics was more or less pernicious than that of the dinner-pills or the morning salts, it is not

here my business to inquire; but he is widely mistaken who imagines that the injury produced by frequent or habitual gluttony is to be repaired by the further injury resulting from frequent or habitual purgatives.

And how far the health of families is preserved, or the rising generation, (to use a vulgar term,) rendered vigorous in consequence of the maternal medicine-chest or the daily visits of the apothecary, is amply evinced by the fact, that, in such families, and in such individuals, and often through a long life, sound health is as unknown, as a state of perpetual disease is common; while, with the usual inconsequential reasoning of vulgar observers, the diseases are supposed to demand that practice which is, in itself, the very cause of them. Let any family or any individual thus educated on purgatives, (provided indeed that the health is not utterly ruined,) take but courage enough to destroy the medicine-chest and lock the door against the physician, and they will soon find which was the cause and which the consequence.

And in spite of the wide prevalence of these opinions and this practice among physicians themselves, I can fearlessly appeal to hundreds, who will confirm by their own experience, that

in innumerable cases of what are called nervous diseases, in ill health under endless forms, it is sufficient for the cure, simply to abandon the system of purgatives, and leave the patient to what is called nature; while this is very generally the real cause of the advantages derived from the adoption of a different class of remedies, inactive in themselves, but serving to amuse the patient while they become substitutes for what was pernicious. This also is the very frequent cause of the advantages of travelling; the effect of which, in such cases, is to suspend this destructive practice, and, very often, by simply abandoning the practitioner and the system under which it had been established.

It would be easy to illustrate all that I have here said, by facts and cases without end; but there is no observing physician who cannot produce abundance from his own experience, while to the opposite class such demonstrations would be useless. One however I may name, a single case out of hundreds; because it is an instance of what I must here notice through a few paragraphs more, namely, the effects of this practice in producing what are called nervous diseases. The patient was a single lady of thirty, of a vigorous and healthy family, and to all appearance

of an originally vigorous constitution, without organic affections, and who had never known any real disease beyond the usual disorders of infancy, in their most slender forms. Every nervous affection enumerated in Whytt's formidable catalogue, had been however her torment almost from childhood; and on making that inquiry respecting her own practice which experience has taught me to place among the first, the answer was, that she had taken salts or calomel almost every day since she was eight years of age, and was surprised that she should still be ill, and not in the least degree better,

Such, in reality, are the common effects of this system, even in sound constitutions, or where no real disease is present; and though other practices, which I shall have hereafter occasion to examine, have their share, I believe that this universal use of purgatives is the leading cause of the nervous disorders so prevalent in England, and which are obviously increasing every day. I admit all that must be granted to want of occupation, idleness, or luxury, as also to imagination and peculiar modes of life which I need not specify; since all these are unquestionably highly efficient in this manner. And while I admit also, so must I here notice, as perhaps the greatest and most general cause

of nervous affections, particularly in men, a state of things which seems to have been very much overlooked by those physicians who have speculated on this subject. I allude to the great increase of mental employment, or of study and business, or occupation, requiring mental rather than bodily exertion, connected often also with that which frequently becomes a species of disease in itself, education, or study and talents, and the latter habitually exerted; added often to confinement and all its collateral evils, and further, too often accompanied by that anxiety, with its occasional attendants or sequels, disappointment, which is the produce of the especial ambition, either as to wealth, or honours, or fame, which denotes the present times. This it is which peculiarly distinguishes our own age from preceding ones, and one class of society from another; which distinguishes very particularly the better and the best ranks of the present day, from the ignorant, idle, hunting and fighting feudal animal once called a Baron or a Knight, and the equally intellectual and occupied retainers who, with less wealth, were of equal use to society.

But all this is inadequate to explain the prevalence and increase of these disorders, including

what is called dyspepsia ; while, if an observant practitioner will easily trace cases innumerable to the very cause that I have here assigned, he can be at no loss in explaining, on the principles of physic, why habitual purging should produce these effects on the constitution. That general irritability is often the result of even a single dose of calomel, or of salts, and, in some persons, very particularly of the latter, is notorious ; but I must not here engage in the pathology of a subject that would inconveniently prolong this necessary digression.

It is easy to see how it will assist in explaining the peculiarly pernicious effects of purging in chronic intermittents, and, very particularly, the injurious consequences produced by courses of purging, or the habitual use of such remedies, in those cases where the presence of local or anomalous symptoms mislead the practitioner as to the real nature of the disorder. This is what happens when such a disease has the character of dyspepsia, or hysteria, or is such as, in any of the modes already described, to mislead a routine practitioner. And the reasons are plain, however obscure the immediate or proximate cause may be. As I shall hereafter more distinctly show, the condition of the nervous system

in such disorders, is one of great debility and irritability, (to use such vague terms for want of better) or it is analogous to that which purging, and also injudicious bloodletting produces. Hence it is apparent that such misapplied practice is to cause injury, not merely of an incidental nature, but directly and absolutely, by adding to the immediate cause, or by aggravating that primary morbid state of the nervous system which is the origin of all the evil.

Thus also, while the abuse of purgatives so often increases or even produces dyspepsia, does its effect here illustrate its injurious action in chronic intermittents. That this is often sufficient to produce the former disorder in a sound person, is well known to every observing physician; and how often it aggravates what it is adopted to remove, is perhaps still better known, at least to the class of physicians to which I allude. I mean by this term, the true and pure dyspepsia, depending solely on the deranged health of the stomach and bowels, as nervous or highly sensible organs; the nature as well as existence of which is unquestionable when it is produced by causes purely mental, or by derangements of the great cerebral or general system. Unfortunately for the unhappy patients, a recent fashion has referred all,

or almost all, these cases, to organic derangements, or, generally and vaguely, to what are called the chylopoietic viscera; a convenient phraseology for evading all reasoning: as that fashion which this improved theory has almost superseded, had assigned them all to the liver, engendering the fashionable term bilious, which has, in itself, cost thousands all their comfort and health, and not a few their lives; since, while the false theory gave rise to the system of mercury as well as purging, it was the effect of the former remedy as of the latter, by its action on the nervous system, to aggravate, or even to produce, the very disorders which it was meant to cure.

I must next inquire respecting the effects of bloodletting in the intermittent, since I cannot well pass it entirely over in this place; while it will be better to reserve the full examination of this remedy till I have treated of the Neuralgiæ, as its abuses concern chiefly some of the local diseases depending on this great leading cause. As to the enumeration which has just preceded, its uses or abuses concern also chiefly the anomalous cases; while, respecting those, I have already noticed, if not sufficiently, the evil consequences which it produces in paralytic cases, and in the painful affections, be they rheumatisms or what

not, which are so generally mistaken for active inflammation.

Supposing the intermittent to be a new disease, of a simple character, the propriety, or at least the safety, of bloodletting may be argued in the same manner as in the case of remittent. Once administered, no evil effects are to be expected from it, particularly in a vigorous subject; while it may even be beneficial by reducing the force of the subsequent paroxysms. Besides this, it is sometimes one of the effects of this remedy to change the type of the fever; and thus it may convert an indefinite or obscure disorder, such as a double quotidian, into one of a more regular form, or, as I formerly observed, cause a remittent to intermit.

But it is rarely innocent, and probably never advantageous, when repeated, unless indeed some other disease, of an inflammatory nature, should be accidentally united to the fever; while, when the case has proceeded for any time, and, still more, when truly chronic, it is decidedly, and sometimes very highly, injurious. It is therefore, like purging, cautiously to be avoided in all the chronic intermittents. I have already, when describing the chronic remittent, shown how it produces palsy, or converts a partial and tempo-

rary affection of this nature into a more general and fixed one; as I have also noticed its mischievous effects in the apoplectic attack; and as these remarks apply equally to all the forms of intermittent, I need not here dwell on them. With respect to such collateral or anomalous symptoms as, from their painful nature, might be judged inflammatory, and therefore as demanding bloodletting, it is the practitioner's duty to see that they do not belong to some of the cases already described, or else to the local derangements of nerves which rank under Neuralgia.

It is here, as in truth in all other diseases, that it becomes requisite to study the disorder, to ascertain its causes, connexion, or analogies: for this it is, and not a knowledge of remedies, which constitutes knowledge in physic, and makes the physician. Our means of cure are few, if our medicines are numerous; the methods of administering them may be learned in a day; and if we do not know, philosophically and truly, how they act on disorders, their obvious actions towards removing disease are as limited as they are generally plain to the senses. This is the physic that all can learn without study, and even without intellect; but this is not the science of the

real physician. To him, the philosopher in his art, names and terms are matters of indifference, and symptoms, disorders, are but indications or evidences of derangements, or of causes of derangement, which form his object of inquiry, and by the knowledge of which he becomes all that a physician can be ; since, this once ascertained, the means of cure follow as a matter of course.

This question, bloodletting, is so serious an one, not less as it regards remittent than intermittent, that it is not easy to quit it, even when it appears exhausted ; while having been rendered supremely intricate by the variety of opinion and the strength of assertion on opposite sides, it would, in reality, almost demand a length of criticism and investigation which it is impossible to bestow on it in an essay of this nature. But the more we read and compare, the more we come to the general conclusion, that in these contests, writers have been often referring to diseases, in reality, different ; that is, essentially different in their symptoms or characters, though intrinsically the same, and inevitably designated by one term. It is, again, the question of the special cases, of which all physic practically consists ; and often, of specially universal or epide-

mic cases, no less than of specially single ones. Hence the perplexity arising from general rules is not less than the thoughtlessness or folly which would attempt to lay them down ; while far too frequently, they have been the result of a pre-determination and a theory, rather than of judicious and careful observation.

The differences in fevers, whether in single cases or in epidemics, or in seasons or climates, are enormous, as has more than once been shown ; and as far as this remedy is required or concerned, these differences consist in local inflammations. Where such affections are ascertained, why should I repeat that there alone can bleeding be proper ? while I am sure that I have the majority of sound and careful observers on my side, when I say, that even here, this remedy is not applicable except when the pulse is violent and the headach severe, or when severe pains indicate material local injury within the abdomen ; that it is never of use except in the early stages of the disease, and is totally inapplicable, unless in very peculiar instances, in certain climates and epidemics, and invariably so in old or long-standing cases ; that it is not to be used but in the hot fit, that if re-

sorted to in the intermission it does not prevent the following paroxysm from being as severe, and that it frequently kills the patient.

If, for these opinions, I could quote numerous authors of great experience and cool judgment, I shall content myself with Clarke and Lind; though to them I might, what is remarkable, add a great number of the very French theorists who consider that gastro-enteritis is the very cause of the disease. The former practitioner condemns bleeding, even in the remittents of hot climates, unless inflammation be absolutely present; pointing out, further, the greater hazard which follows its use in autumn, and in towns and hospitals; while Lind equally speaks of the danger of resorting to it in the fevers of Bengal. Even Sydenham, whose extreme affection for this remedy is sufficiently notorious, confesses that it is a dangerous expedient, and often protracts the fever to double the time which it would otherwise have lasted.

The next question concerned in the remedies of intermittent relates to diet, under which I may include wine; and as I have noticed this last in as far as it is a positive medicine in the acute or new disease, when speaking of remit-

tent, the remarks on it which follow apply chiefly to the chronic form.

Supposing the disease in existence, cases may be conceived where restrictions as to diet and wine may be necessary ; and these can be determined from the general principles already laid down respecting bloodletting or other debilitating proceedings. But in its progress, and still more decidedly when it has assumed the chronic form, a good diet, together with wine as a part of this, become necessary, and may even be enumerated among the means of cure ; while the reverse practice, or low diet and abstinence, are found to aggravate it, or to render habitual and inveterate a disorder that might otherwise have terminated. This is a conclusion which might have been drawn *a priori* from the theory of the diseases and from the analogous evil consequences which follow all other debilitating practices.

It is not less the conclusion from experience, drawn in Italy and in France ; while, remarkably enough, in the latter country especially, notwithstanding the prevalent theory to which I just alluded, of the existence of gastro-enteritis as the cause of even the chronic and ever-during fever which torments the inhabitants of its pernicious

districts from the cradle to the grave, this very condition is attributed mainly to a bad diet and a poverty so great as not to be able to command wine; as these also are pointed out for the best means of cure, as of security from relapses. I could not well give a stronger proof of the little value of such a theory, when it is one that experience thus contradicts, nor much better arguments in favour of any practice, than that it is adopted by those whose theory it opposes. Such also is my own experience; and yet, sometimes from a recent fashion, at others from false views of the nature of these cases, nothing is more common among ourselves, than to find the most rigid restrictions on both these subjects; and even low diet with water, recently also with the addition of frequent small bloodlettings, recommended as the only cure.

With respect to wine or spirituous liquors, I must here however add a remark which could not well have found a place elsewhere, and which yet does not properly relate to the subject of diet. When used in the chronic diseases so as to produce intoxication, they sometimes remove the disorder suddenly, at least for a time; and in some cases they may thus remove it never to return, or produce a real cure. Hence this prac-

tice has acquired a certain celebrity among the common people; though frequently misapplied, and chiefly from confounding the new disease, in which it acts in the manner formerly explained, with the chronic one in which it is infinitely less effectual, and not unfrequently injurious. If however it does cure in such cases, the effect is analogous to that which results from any other violent and sudden action on the body, or from the production of some other and temporary disease; and therefore it is most likely to be valuable in those who are habitually abstinent or sober. If it does harm, as is most frequent, it is from inducing debility; and thus will it be most mischievous by repetition, if it fails to cure. Thus we can easily judge of the degree to which wine may be allowed as an article of diet, and of the restrictions to which a patient labouring under chronic intermittent ought to be subjected.

It is probable that in the simple chronic intermittent, little evil actually arises on the average, from the direct prescription of low diet and abstinence from wine; and chiefly perhaps because such patients become weary of physicians, and weary equally of medicines and restraint. It is in the anomalous cases chiefly that this happens; and especially when the disorder is mistaken for

some of those already described, for which low diet is esteemed necessary, and wine hurtful. Thus, for example, in the intermittent rheumatism of the intercostal muscles, such practice, persisted in from the notion of its being pleurisy or phthisis, while it would be followed on account of the reputed characters of such disorders, would be injurious, as tending to perpetuate the disease. And not only in this, but in all similarly mistaken cases, it is the effect of such a system, not merely to perpetuate the original symptoms against which it was adopted, but to induce other bad effects, and chiefly that debility and those trains of nervous disorders which any debilitating practice is found to cause. And further, if in the chronic and obscure disorders of this class, such a direct and continuous effect is produced, it is also the result of such a system of diet to induce a tendency to relapses, or to render a susceptible patient still more susceptible of the action of the exciting causes; just as similar treatment, or a diet habitually poor, renders the healthy peculiarly exposed to the diseases of Malaria.

This is the very French and Italian experience to which I have just referred, whether as it relates to the continuance or the reproduction of

this disease, or of the several endemics produced by Malaria, or else as to the susceptibility of new diseases by those who have not been formerly affected. And such, in these countries, is the extent of that experience, so ample also the demonstration of the nature of the disorder or disorders, that no reply can be made to what I have here been recommending; unless it were to assert that England does not possess those disorders, and that every thing which I have, in this essay, been attempting to demonstrate, is a pure dream.

To show, now, specifically, under how many forms of disease depending on this cause, low diet may be pernicious, would be to repeat what has been said before. In this case as in that of bloodletting or purging, it is the knowledge of the disorder which must be inculcated; and as, when that is known, the treatment follows of course, the duty of a writer as to the methods of cure is nearly finished, if he has been successful in pointing out the method of distinguishing the disorder. But if I have taken occasion to indicate the influence of system, of fashion it may truly be called, as to certain remedies or medicines, it will not be useless to point out the existence among ourselves of a similar fashion

respecting diet and wine. If it is partly digressive, it is not a pure digression: since being a blind practice, as it is an extensive and an increasing one, it possesses a considerable influence for evil as to the disorders under review, attributed as they so often are to causes in which such practice is deemed useful or proper. It is a subject however on which I must be brief; as to discuss it as it merits, would occupy space which I should not be justified in here allotting to it.

It would be amusing to trace the moral causes connected with this modern revolution of opinions, but it would lead me further than I dare now venture. As the fashion now stands, and taking the theory in its most perfect form, it is somewhat complex, but is comprised chiefly in the following laws; that all persons, at least in the upper classes of society, eat more than is necessary, or more than is salutary; that all cookery, meaning by that, refined cookery, as well as all condiments, is pernicious; and, to sum the whole, that a large proportion of the diseases of mankind is the consequence of too full or too luxurious a diet. This is a sober view of opinions not always stated so moderately; as there are many physicians who, from causes respecting which I need not inquire, maintain this doctrine

in the extravagant language of the poets and the satirists. And, in medical practice, the consequence of such opinions is to produce an interference with the ordinary diet of society, in health as well as in disease, which is sometimes pernicious, and commonly very useless; not unfrequently as absurd on the part of the physician as it is teasing or tormenting to the subjects.

It would be long to discuss this particular question as it deserves; but a few words may suffice to render the truth of the theory at least doubtful. The diet, or the quantity of food consumed by the better classes in England, has been most materially reduced in our own days from what it was in former times; as the very slightest historical and antiquarian knowledge will suffice to prove. With respect to any imagined excess in quantity, in any case, it is notorious that the body, Nature as it is called, possesses the means, however obscure these may yet be, of disposing of what is superfluous, without difficulty and without injury, supposing that the digestive powers are not in the first instance offended; or that there is a steady remedy, in all animals, provided against superfluity of food. For the reverse, on the other hand, there is no remedy: and for one case of disease produced by excess of food, it would be abundantly easy, even in well-fed Britain, to discover thousands of evils,

and indeed of absolute diseases, caused by deficiency; the main and prevailing evil being premature age and a shortened term of life, as is most obvious in the labouring classes. If the upper classes are more durable, both as to youth, or beauty, which is nearly equivalent, and also as to longevity, on the average, than the lower, it is chiefly owing to a better balanced proportion between the food and the labour, or, what is the same thing, to food exceeding the precise quantity necessary.

And that the better fed and more opulent classes are the most durable and the most free from diseases, is certain, though we must take care not to make the quantity of medicine swallowed the test of disorders, considering how very much this is matter of luxury. Let those who doubt this, see what a soldier, a sailor, or a labourer, is at forty, compared with the opulent ranks; or what, in the other sex, is an opulent female of thirty compared to a woman of that age in the lower classes. And this is a fact of some importance in political arithmetic; however the Reversionary tables of computation have persisted, from very obvious motives, in deriving their conclusions from an average which is no small source of profit; of profit not perhaps strictly just, could there be deemed any injustice

in commerce, in demanding all that will be conceded and taking all that is given.

With respect to refined cookery, it is by no means proved that more food is consumed under this system than under a plainer one : while it is an uncontroverted principle, that the food, be it what it may, which is most grateful, is also the most digestible ; such is the association between the palate and the stomach, or between the mind and the digestive powers. If it were to be made a question of votes, the opinion of France is also universal in favour of this view ; though one exception may be allowed respecting the excessive use of strong solutions of gluten, or of meat reduced by cookery to that state ; since it does frequently offend the stomach, unless mixed, as is the practice of France, with a due proportion of bread or other less concentrated nutritious matter. And as to condiments, of whatever nature, not only the practice and the instincts of all mankind, even in the savage state, show their utility, but they are admitted to be necessary by all rational physicians, whether as stimulants, or as increasing that grateful taste which aids the digestion of food. It is to be suspected that we must have recourse to the ascetic principle once more, operating unsuspected on so much of our common conduct through life, for the origin of

this dogma ; a principle, as I have already remarked, which has decided that whatever is pleasing is pernicious, and that to renounce most especially whatever is most agreeable, is the duty of man.

While I am on this subject of diet, always rendered intricate by the interference, a not very unnatural one, of prejudices and popular opinions, let me here make one distinction, referred to this place when speaking of diet under remittent fever, which, obvious as it is, is not always made, even by physicians. It is, the difference between digestible food and stimulant food. The former exists, in reality, in old meats and game, and, as to cookery, in that which is roasted ; and, as it happens, such food is also stimulant, being digestible probably for that very reason. The reverse articles of diet, of which chicken may be taken as the type, and boiled chicken as the extreme, are least digestible, but then also they are least stimulant ; whence, in practice, a very different rule of diet for those whose stomachs require stimulus and those to whom that is pernicious, or, in comparing a convalescent from fever with a dyspeptic person ; whereas in ordinary practice, that distinction is too generally confounded, by adopting the general term a weak stomach, and treating all weak stomachs with the indigestible substances, fish, veal, and chicken.

Lastly, when it is said that superfluous eating is the cause of a large proportion of the diseases of mankind, it is an assertion that ought to be proved, by showing what are the disorders thus produced. Individual cases of actual and habitual gluttony must be excepted, or granted: but these are so rare, that it would be difficult to produce them in any number, and, still more so, to find cases where they generate decided diseases. I need not name the obvious disorders which they are supposed to cause, or do produce; since these are notorious, as they are limited to one or two: while out of the remainder of that enormous catalogue by which mankind is tormented or thinned, and of which many are supposed or asserted to be produced in this manner, by the vulgar, the ignorant, and the satirist, as by those who speak vaguely, thinking as vaguely or influenced by habit, there is not one that can be really traced to gluttony, far less to simple exceeding in diet; and while, at the same time, the real causes of all these are notorious, or well known to physic. A critical analysis of this question would be abundantly easy, as the proofs could be rendered most satisfactory; but it is one in which I must not here indulge.

Yet the very case before us would, alone, go far to prove how little the excess of diet is concerned in producing the mortality, or even the diseases

of mankind. I have already said that the disorders produced by Malaria include more than half of the total number prevailing at any moment throughout the world; as the deaths caused by this poison amount to half the mortality, or more, of the earth; since writers far less liable to suspicion than I probably now am, have stated it as far exceeding two-thirds. Here, at least, diet, or rather intemperance, has no influence; and indeed so far is this from being the truth, that it is insufficiency of food and of "luxury" generally, which is one of the great co-operators in this enormous mass of evil. Were I to add to this, Plague, Contagious fever, Consumption, Small pox, Scarlet fever, all of them, and more, aiding in the great catalogue, not merely of mortal diseases, but of diseases numerically, and all equally independent of intemperance, it would be somewhat difficult to see how this popular argument could be maintained, except as popular arguments are, in spite of demonstration; while a further analysis, which would be abundantly easy to make, but which I cannot with propriety state here, would leave little indeed to be said on the opposite side.

To restrain, to torment, and to terrify, have been too much the custom of physic and physicians, as they have been that of other sects in mankind, of far higher note, valuable engines of

power as they are: and if this system is carried into much more of life, there is nothing which affords a readier handle than diet, since the restraint can be made incessant, while the terror and torment are most effectual; interfering as they do with our most necessary wants, as well as with our ever-repeated pleasures: pleasures, which, however it may be unbecoming to speak of them, are denied only by hypocrisy, or overlooked because of their frequency and certainty; while the conviction would not be difficult or long to any one, under events that many have experienced, if it comes not to those for whom the world is a storehouse of cookery, and life a life of eating.

A similar fashion has, and recently also, been introduced with respect to the use of wine; and not as an article of inebriety or excess, but as a mere branch of diet. I do not use language that has not been seriously used by the more violent theorists on this subject, when I say that it is reputed as a pernicious and a poisonous substance. It may appear singular that such a fashion should have arisen, somewhat as in the case of food, just at the moment when the use of wine in excess had fallen into disrepute in England; and that with its gradually diminishing consumption, this dogma has even gained ground. Of exceedings in the use of wine, it is not my

business to speak, as I assuredly do not defend those: but even here, it would not be an easy matter to point out the disorders which it causes, if we omit that gross and incessant intoxication which destroys life, sometimes almost without causing a disease to which we can give a name. As to the pernicious effects produced by that moderate and rational use of wine which does not require to be defined, there is no physician, however inveterate his prejudice may be on this subject, who can demonstrate them, far less any definite diseases produced by it; while the whole experience of mankind, from the beginning of our knowledge of history, is against such an opinion. But while we may argue respecting asserted facts by means of general principles or by evidence, it is in vain to contest with prejudices, and above all with a prevailing fashion; with opinions originating in temper, love of notoriety, or what not, and disseminated by means of that multitude which is ever inclined to follow because it cannot lead. And if there are tormentors of others, so is there no want of self-tormentors, in this as in many other cases; the victims of many moral causes which I cannot here discuss, and not seldom of that ascetic principle again, which is instilled into us through our whole education, though not perceived in its in-

fluences, because not known to exist by those who submit to it.

I have left to the last place that remedy for intermittent which is popularly called change of air. Of its efficacy in this disease, and chiefly in the chronic variety, there is no question ; since in the latter, it is often the only remedy ; but it is not the less difficult to give any rational account of its mode of operation : while I could do little more than repeat what I have already said when speaking of the cure of remittent.

We can however easily understand, that where the disease is maintained, as it has been produced, by residence in the vicinity of Malaria, the cure may be effected by simply removing the cause, as in that disease : and this is probably the circumstance under which it is most generally effectual. And here, as in that case, it becomes necessary to inquire strictly respecting the character of the soil or country to which the patient is to be removed ; or, the nature of the territories through or to which he may be compelled to travel ; and hence, again, the necessity of that accurate statistical and geographical knowledge so often censurably neglected by physicians.

Independently of such a removal from the original cause of the disease, the chronic intermittent, and indeed the disorder when of a new

character or of short duration, is, like the remittent, sometimes cured by simple change of air or place, and without regard to any reputedly greater salubrity in the place resorted to. And I think that experience shows this to be the remedy chiefly to be relied on in inveterately chronic cases, or perhaps the only one which is really effectual; since, in those, every thing else seems to fail. If in some, however, one change is effectual, it much oftener happens that frequent removals are necessary, as formerly observed; or that a relapse produced after one remove, must be met by a fresh one. The operation in this case seems to be that of breaking the habit of the disease; since a chronic intermittent appears most often to be a mere habit, as mysterious as are all our habits, whether of disease or health.

If this be the case, a difference in the quality of the air breathed, which is what the popular phrase would signify, is not in itself the remedy; though respecting this we really are not in a capacity to argue at present, since it is most certain that the atmosphere, in different states or places, produces effects on the body, of which our present chemistry does not enable us to investigate the causes. The lungs, or the organs here concerned, to whatever extent, are in reality chemical agents superior in discernment or power to those of our laboratories; or the involuntary

and unconscious animal is that chemist which the reasoning one is not ; carrying on operations which he can neither imitate nor discover, and detecting substances which he cannot find. And thus also it is, even with regard to vegetables. If chemistry cannot detect that Malaria, or that contagion, before which mankind falls as before the thunderbolt, if where, to its finest tests, the atmosphere is the same compound, and yet even vegetables either thrive or die, there may be far more of which it does not yet know, capable of acting powerfully on the body, whether for health or disease. Thus does our nicest chemistry detect in the atmosphere of London, nothing more than what the touch itself discovers equally well, volatilized coal, soot ; a substance which no knowledge of ours can infer to be a poison to vegetables : yet here vegetables refuse to live or cease to thrive ; losing their powers gradually, or, as London extends, retiring to a further circle, as by a slow gradation they lose the power of producing fruit, at length to yield up even their lives.

But while we do not know that the air alone does act thus as a remedy for chronic intermittent, and while it is to be presumed at least, that change of habits is an efficient cause in the cure, it is expedient that, to change of air or place, there should be added every other change which

can be made as to the former mode of life of the patient, whether as to occupation or what not, while the modes of effecting this are too obvious to require explanation. But I will not conclude this part of the modes of cure, without repeating what I said on a former occasion, and what most obviously is one of the very frequent advantages derived from "change of air." By means of this, a pernicious method of practice is broken up or abandoned; or the disease is truly cured by casting off the misapplied remedies and the practitioner by which it was produced or maintained; as in many other cases, where other ill health is the result of tampering with medicines, and the effect, purely, of such medicines, it is removed by simply abandoning their use, while the credit is given to the travelling or the change of air.

It would be more agreeable if points in medicine, or indeed in any other science, could be discussed without collateral censure; but it is plain that where there are no grounds for such remark, there is nothing to be corrected, or that science has attained perfection, and ought therefore no longer to stand in need of elucidation and inquiry. To attempt to point out what seems better or right, it is necessary to explain what appears bad or wrong: and it will scarcely be contended that physic has arrived at that point of perfection which admits of no corrections; while

wherever it is imperfect, or erroneous, it being also an art administered by men, those who thus administer it must become implicated: an appearance of personality being thus conferred on remarks which are purely directed against the imperfections of the science and the art: imperfections in which we all partake, but which it is the duty of each to labour to diminish, for himself as for others.

If I have thus terminated all that my own and the general experience has dictated as to the treatment of chronic intermittent, I must not however pass over the opinions of Rnsh, however little they may agree with my own experience, and with that, I may fearlessly add, of practitioners at large. Yet it is impossible to disbelieve a positive assertion on the part of such a man, however marked by singularity these have often been: and the only solution therefore must be, that the chronic intermittent of Philadelphia or New York, or perhaps of the United States in general, is a different disease from that which bears the same name with us. His remedy consisted of blisters applied to the wrists, a plan which, according to his statement, was generally successful. When it was otherwise, one or two bleedings never failed to remove the disease, while bark was found useless.

I may now terminate what relates to the re-

mittent and intermittent fevers, or the first division of the medical part of this essay: a discussion which, if it has occupied an unusual space, was demanded principally by the view here taken of the anomalous forms of this disease. It is in attempting to establish new views, that a writer is condemned to a length of inquiry which is easily curtailed when once these have become admitted; as it is in working his way through controverted points, that he is compelled to accumulate evidence and arguments. And if, while the chief inquiries respecting the cure of these fevers have been directed to the obscure and anomalous cases, I have sometimes omitted to specify to which of these, respectively, the remedies, whether for good or evil, apply, the reader will have no difficulty in reasoning respecting the use and abuse of any mode of cure, when he has once convinced himself of the truth of these general views, and learned to discriminate the cases that may fall under his notice. A single example from each of the two main divisions, will suffice as an illustration of what it must really be now useless to detail more particularly or minutely.

If the case should be a palsy dependent on intermittent, the fundamental means of cure will be the same as in the simple fever, acute or chronic; or, to shorten the catalogue, it will consist

in bark, and in change of air. But in such a local case, we are also permitted or called on to use the local or other means which are found beneficial in palsy from whatever cause: the great caution, or exception, being this, that we avoid what, from being hurtful as to the fundamental or real disorder, must also be pernicious to this its mode or symptom; while what these things are, has been amply shown.

On the other hand, should the case be an inflammatory one, should it for example be of a pleuritic character, the fundamental caution, here also, should be the main circumstance in our recollection; or we must remember that while bloodletting does not cure, but aggravate, the original fever, it will also be prejudicial to this mode or symptom, exactly under the same circumstances and in the same degree. But here also, as in the case of a palsy, we are permitted to use such accessory means as are of service in diseases of this character, while not prejudicial to the fundamental one; while, if I need not specify what these are or may be, a distinct example of this nature will shortly come under review in treating of the Neuralgic ophthalmia.

END OF THE FIRST VOLUME.





